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OCTOBER

# SCIENCE FICTION



**NEW FOUNDATIONS**  
by Wilmar H. Shiras



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COVER BY ROGERS

YOUR NEXT ISSUE OF



## *Astounding* **SCIENCE FICTION**



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# NEW FOUNDATIONS

By WILMAR H. SHIRAS

*A meeting of minds is never easy—but a meeting of such minds as the mutant children, with their strained patterns, was bound to be difficult. . . .*

"AND that's the full story to date of Timothy Paul and Elsie Lambeth, the Wonder Children," concluded Dr. Peter Welles, psychiatrist.

Miss Page caught her breath.

"I should have guessed it," she said, "or something like it. But who could have guessed anything like that? Tim seemed like such an ordinary little boy. And even since Elsie came I hadn't dreamed of anything of such proportions. They didn't seem like super-wonderful intellects, although anyone could see they were quite bright."

"They were hiding from you," Dr. Welles smiled, "under orders. But now that we propose to start a school for these children, and need teachers and matrons, you are the first one Dr. Foxwell that I want. Will you join us?"

"Indeed I will! When is the school to open?"

"We must get the scholars first. I plan to spend August touring the country to see the children and arrange with their guardians. Meanwhile we have been able to write to some of the children and make preliminary arrangements. When I go to the Psychiatrists' Convention next week, I intend to see Jay Worthington. I'm leaving here a day early for that purpose."

He unlocked a drawer—they were talking in his office—and leafed through some papers until he came to those he wanted.

"Here's the correspondence. Jay wrote us that he had seen our advertisement and thought it deserved wider attention, adding that he took a personal interest in the matter. A few days later, his name turned up on the list. The detective agency has by now found nearly all the children for us, checking everyone who was exposed to the radiations, and eliminating those who are known to have died childless."

There was a tap on the door, and two impatient children popped their heads in.

"What does she say?" demanded Elsie.

"She says yes," laughed Peter.

"Can't you talk him into getting started sooner, Miss Page?" begged Tim. "That's a thing I don't understand about grown people. You have so much less time left than we do, and yet you don't seem to think time matters at all."

"Older people have learned to make haste slowly," Dr. Welles replied. "The idea of the school is scarcely a month old. Believe me, Tim, we are as impatient as you are, but things must be planned and come in order."

Elsie moved restlessly.

"If you see the children next month," she complained, "I don't see why you can't start the month after. We don't need all those buildings Tim planned."

Tim was prompt to agree.

"We're already fourteen years old," said he, "and in a few years we'll be grown up and scattered. Let's just have some prefabricated houses put up quickly, and get started this September, can't we?"

Peter Welles shook his head.

"At a week to interview each child and make arrangements with the guardians, it will take months."

"Why a week?" cried both children.

"Because," said Peter somberly, "there may be more difficulties than you can imagine."

"Jay Worthington?"

The boy nodded. "You must be Dr. Welles," he said in a rapid treble voice. "Come right in, doctor." He was vibrating with excitement. A tall, lanky boy, awkward and what Tim's grandmother would have called "high-strung," Jay was clearly trying to talk. He led the way into the living room, chattering at double speed all the while.

"My aunt's out," he said, "and my uncle has gone for a walk. I tried to get rid of them, but we'll have to watch out. There is so much to say, I don't know where to begin. But that's for you to say, isn't it, Dr. Welles? There must be something very special back of all this, and a reason for your visit, and for your asking about my parents. The Curtises aren't really related to me, you know; they adopted me when I was ten months old. This is the best chair, and here's an ash tray if you want one."

"Our letters have been brief because yours were," said Dr. Welles, accepting the chair, "and it is better policy. But now by all means let us get to the point, without fencing. You must have a pretty good idea of what this is all about."

Jay bobbed his head vigorously. "I'd rather you said it, though," he replied.

"You answered our ad and said that you had a personal interest in children born in 1959 who were of very high intelligence."

"That's putting it bluntly," said Jay, catching his breath. "I didn't mean to be so plain . . . if I meant . . . I—"

"We're talking straight now. That is what the ad meant, and you knew it. Your name was also on the list given me by a detective agency which has been busy tracing the children born of parents who died as yours did. You know how they died?"

"Yes, the atomic plant explosion."

"Right. Putting these two things together, we knew where we stood. So Tim wrote to you that we were starting a school for children of high I.Q. and that you would be interviewed."

"That was a body blow," said Jay. "I couldn't see how you knew my age. And then I realized that you hadn't actually said you did know, and perhaps I had misread you. I realized that you might mean you thought I knew some bright children. So I wrote back and said I didn't know any such intelligent children, and then Tim replied that since I was born in the same year he was, I must know some of the things he was interested in. Then I was pretty sure something was up, but I replied with a line saying that perhaps Dr. Hollingworth's books were what he was interested in having, and he answered on a postcard that they were too elementary. And while I was still wondering what to say next the air mail letter came that you would be here a week after my fourteenth birthday with greetings and a message. You seem to know more

about me than I can account for, but I still don't know how much you know."

"I'll be perfectly frank. The atomic explosion gave slow death to hundreds of men and women. But before they died, some of the couples exposed to the radiations had children, and some, perhaps all, of these children are mutants of extraordinarily high intelligence. We want to gather them all together, where they can have the benefit of one another's company and develop as they should."

"That is just about as I figured it," said Jay with a sigh of relief. "Tim is one of them, of course? And Elsie?"

"I have much to tell you about them. But let me find out about you first. I know that your uncle is John Curtis the historian. Who are you?"

"Why . . . I'm his adopted son, Jay Worthington. The Curtises had me keep my own name because—"

"That isn't what I meant," said Dr. Welles. "I meant your pen name, or the name you take out patents in, or whatever you do. You don't use your own name for things like that, do you?"

Their eyes met and there was a moment of tense silence.

"You do know, then," said Jay. "I'm James Vernon Worth."

This was too great a shock for Peter Welles to take unblinking. He even gulped. When he could speak again he asked, "Does your uncle know that?"

"Of course not. That's the whole point. If people knew, they would say it was all his work, or that he helped me so much it might as well be. And if he had known what I was doing at first he would have tried to help me. I didn't want that. Of course I have to help him; but that's different."

"You help *him*?"

"Yes," said the boy. "He is blind."

The phone rang while Peter was still trying to take in the implications of what he had heard. Jay, with a muttered word of apology, dashed out of the room.

James Vernon Worth—this boy? Those three magnificent biographies written by this child? But if he was the adopted son of John Curtis, and helped Curtis with his work—

Jay was back, breathless but talking almost before he had opened the door.

"We haven't much more time," he said.

"My uncle will probably be back in a few minutes. He doesn't take long walks."

"Well, here's the situation," said Peter, and he talked rapidly for ten minutes, while Jay listened intently and bobbed his head in eager agreement.

"It sounds wonderful," said Jay at last, drawing a deep breath. "I wish I could be with you. But I can't."

"We'll find some way to arrange it"

But Jay shook his head.

"You see, it's different with me," he explained. "I'm getting along all right. People think it is quite natural for me to know things, for since my uncle's blindness five years ago I have read to him every day, and even before that. And I have always been with people who talked about things all around me. My aunt is a very brilliant woman in her own right. The amateur radio station is really hers. She got it so uncle could talk to people all over the world when he couldn't read any more. Everybody knows they asked for a bright baby to adopt, and the rest is credited to my environment and upbringing. This is a university town, and people are used to bright boys and they like them. So I don't have to hide very much. Of course nobody knows I write books. But I get along very well. And of course I have to stay with my uncle and aunt. They have nobody but me. And really I'm happy here. There are the dogs to train, for the blind, you know. I didn't train my uncle's dog, Grigio, of course, but we bought Guarda soon after and we train her pups to be guide dogs, and give them to people who need them. My aunt and I train them, and Uncle helps."

A car pulled up in front of the house and a brisk woman, fortyish, jumped out.

"My aunt," exclaimed Jay in all haste. "Quick, please! Come out and look at the pups. We have two for sale now for pet stock. They don't all measure up to be guide dogs."

Peter allowed himself to be led out the back door and to the kennels.

"I see what you mean, Jay," he said, "but we can't leave it at that."

"We must," said Jay. "But we can correspond, and you'll let me know what goes on, won't you?"

Peter scribbled on a card. "Here's my hotel. I'll phone you soon, and we can meet a time or two before I have to leave, can't we?"

"Oh yes—please do."

As the boy knelt down to scratch a pup's

head through the wire of the enclosure, Peter's quick eye saw signs of tears.

"We'll arrange it, Jay," he promised.

"No," said Jay, gulping. "I wouldn't go. I wouldn't go if I could. I'm going to stay with my uncle, always."

A few minutes later, after a perfunctory inspection of the pups, Peter Welles went away, feeling greatly depressed.

A telegram signed by Mark Foxwell awaited Peter at his hotel.

"Agency reports another prospect same city. Stella Oates, 432 Vine Avenue."

Peter stared at the telegram for a full minute. And how, he wondered, am I to approach this girl, knowing nothing about her, or her background, or her present home or guardians, am I to walk in without any warning and whisk her off to the other side of the continent? How can I get a chance to talk with her alone? Should I phone or write first and pave the way?

But Peter knew that he could not wait. He must see her that very night. The psychiatrist looked at his watch; it was nearly six o'clock. Well, dinner first, and perhaps he could think of something.

At half past seven, ringing the doorbell at 432 Vine Avenue, Peter had still not decided what to say.

Uproar broke out behind the closed door before the bell had ceased ringing. The doctor's trained mind sorted out the sounds and identified them. The crashes and shrieks on the left sounded like two or three children charging through the same doorway at once, bumping one another and complaining about the bumps. The rapid series of thumps was someone in heavy shoes rushing down the stairs. The slower heavy tread and rumbling voice probably indicated a man trying to restore order, and the quick pattering steps were, very possibly, the lady of the house on her way to the door.

A woman in a gay apron opened the door. A hand behind it pulled the door open more widely, disclosing several dark-haired children in their early teens. In a doorway on the right stood a tall man with a newspaper in his hand. And behind him, in the room he had just left, sat a plump, blonde young girl with a book in her lap. So detached was she from the noisy quartet staring and giggling and nudging one another as they hastily retreated, helped by the woman's good-natured pushes—with such a cool disdain did the blonde girl view



the scene in the crowded hallway—that Peter spoke instinctively to her.

"Stella," he said.

The girl rose quietly and came slowly toward him with a smile.

"You must excuse this rabble," the woman was saying. "They were expecting some friends—"

"That's quite all right," said Peter, and

suddenly a worse uproar than ever broke out all around him. In the street behind him a rattling car appeared, honking loudly. To the shouts and screams of the young people in the car were added shrieks and yells from the waving quartet in the hall. Dr. Welles moved out of the doorway with all haste; the four shouting adolescents pushed through it and were gone.

"I'm glad Stella wasn't going with them since you want to see her," said the woman. "I'll get back to my dishes, then," and she was gone, too.

Peter turned to the tall man in the doorway.

"Are you Mr. Oates?"

"Yes. Come on in."

"My name is Welles. Dr. Peter Welles."

The men shook hands. Peter began to laugh.

"This reminds me," he said, "of the Queen's advice to Alice: 'Curtsy while you're thinking what to say.'"

"Begin at the beginning," quoted the little girl, "'and go on until you come to the end. Then stop.'"

Mr. Oates looked from one to the other with a blank stare.

"You want to talk to me, too?" he asked.

"Is it something about her health?"

"No, Mr. Oates. You are Stella's guardian?"

"Yes. Her uncle. She's my brother's child. Have a chair."

They sat down. Stella's expectant eyes fixed on Peter.

The shabby old house and the swarm of half-grown children decided Peter. The only possible approach was the free-scholarship one.

"It has been suggested," he said, "that Stella might be eligible for one of the free scholarships that we have to offer."

The man's face hardened.

"First let me tell you who I am," said Peter, smiling disarmingly. "I am a medical man, attending the convention of physicians here this week. At home, I am the psychologist for the city schools of Oakley, California; but I am resigning the position to take charge of a school to be opened there by a wealthy couple, Mr. and Mrs. Herbert Davis, as a memorial to their daughter and her husband. It is their wish that the school educate and care for other children who were orphaned at the same time and in the same way as their grandson."

"In the same way?" repeated Mr. Oates. "You mean the radiation deaths?"

"Yes," said Dr. Welles. "You will find my name in tonight's paper in the list of those attending the convention of psychiatrists here. Let me show you some identification. I can give you the names of local men who can vouch for me."

The tall man looked over the papers which Peter offered him, and nodded.

"The school is to take young people through high school and college," Dr. Welles went on, "and is to open within a few months. The young people must pass certain tests first, and if they do so satisfactorily they may apply for a scholarship which will pay part or all of the student's expenses. I don't know whether you would care to have Stella go so far away from home, but if you would consider allowing her to take the tests, and she passes them—"

"Are you trying to sell us something or give us something?" asked Stella's uncle.

"If she passes the tests, whether you pay anything at all is up to you," said Peter. "Those who can pay and are willing to do so, pay as much as they wish. You have, I believe, several children of your own to educate?"

"The four you met in the hall are mine."

"Then in your case it could probably be arranged that all of Stella's expenses could be paid by the school. The aim of Mr. and Mrs. Davis is to educate these other children as a memorial to the parents of their grandson. You can easily satisfy yourself that Stella will be in good hands."

Mr. Oates looked again at the papers he held.

"What did you say your part is in all this?"

"I manage the school," replied Peter, "and Dr. Mark Foxwell is associated with me in the work. Miss Emily Page is to be Dean of Girls. One of our prospective students is boarding with Miss Page until the school opens."

"Well, sir," said Mr. Oates, "if all this is as you say, and can be proved to be all right, I don't mind telling you that we might think it over and decide to do it. That is, if Stella likes the idea."

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Both men turned to look at the child, who had been listening without a word.

"I think I would, Uncle Ralph," said Stella.

"Suppose you go along then and make coffee and cut some cake for us," suggested her uncle. "Give me a little while to talk business with Dr. Welles here." He walked to the other end of the room, and Stella came to the doctor's side and said in low, urgent tones: "You were *sent* to me, weren't you?"

"You might put it that way," replied the psychiatrist. What did she mean?

Her uncle was returning with cigarettes and matches, and Stella left the room.

"I wanted her to go so I could speak right out," he said.

Dr Welles accepted a cigarette.

"The fact is, Stella isn't happy here," said her uncle, "and there isn't much I can do about it. But I tell you fairly, we have no money for expensive schooling."

"No money is needed, Mr. Oates."

"She and her cousins don't get on. They tease her a lot and I can't wonder they do. Stella's notional. Sort of affected. She puts on that superior air of hers, and the other kids don't like it. They torment her and make her miserable. I moved to this house on purpose so she could have a little room of her own, and I told mine to keep out of it and let her things alone. Bits of poetry she used to try to write, they'd read out loud and laugh over. She's a bright little thing, Stella is, but sometimes sullen. I've often thought if she could go away to school it would be the making of her."

"She is different from her cousins, then."

"Yes, she's a hop out of kin, all right. And she takes a sort of pride in being different, too. I went so far as to have a talk with her teacher about her last May. She told me Stella isn't much like any other kids and she might grow up to be a genius. I favor her all I can, but she's beyond me to understand. She has me get the most outlandish books out of the library for her to look at, nothing a normal child would take any interest in."

"What sort of books?"

"Oh, old languages, with different alphabets, and ancient history, and things about Asia and Africa. No harm in it that I could see, but I don't know where she ever even heard of such things. She does well in school—much better than the rest of them. That shows them up, of course, and they don't like it a little bit. Mine have good

heads enough but they're always carrying on and gadding about in a noisy crowd and they don't take any interest in their books. My wife's as good as she can be to Stella, and yet it's hard all around. Mine act up and make a racket on purpose when they know Stella wants to be quiet, and she shows plain she don't like it. She always has her nose in a book. She likes deep stuff, too. She says the others are just like savages. Of course, kids will call names, and mine say she just tries to show off. They say she only pretends to read those history books."

"What do you think?"

"I can't make head or tail of the books myself, and I doubt if Stella can, but it seems to interest her. Now, you see how I'm placed. If I send her away to school at my own expense, mine would feel sort of slighted, you see? They don't grudge their cousin her fair share, and never did, but that would be a good big slice more than her share. I don't have too much to do with. So if there is any way it could be managed so as not to take away from my own children, Dr. Welles, let me tell you it would be a godsend."

"Mr. Oates, I am glad you have told me all this, and I can see your problem," said Peter Welles.

"You said you were the school psychologist where you live," said Ralph Oates, "and I thought likely you'd understand the girl better than we do."

"If you trust her to us, I promise that you'll never regret it."

"I'll want to be sure, you know. Look up your references and all that."

"I'll give you a list of local men who know me," said Peter, scribbling rapidly on the back of a used envelope. "Call these. And others in the West," he scribbled more. "The school will not open for some months," said Peter, who had just had a brilliant idea, "but you can send or bring Stella to us any time. Miss Page would be glad to take her. Miss Page has been teaching in the public schools of Oakley for thirty years or more; she was one of my teachers when I was a boy. Stella might as well live with her and go to public school as Elsie does, and I will do what I can for her. You think, don't you, that she needs some special attention?"

"Yes, I do. I don't know much about such things, but she doesn't seem to adjust well at school, or at home where she has

lived all her life. I think mine will be better off away from them. They're too different to get along, and it gets worse all the time."

When Stella came in with the coffee and cake for which she had been sent, it was already settled that Dr. Welles would spend the day after next giving her the required tests.

Maybe all I'll get is the problem children, thought Peter ruefully as he went back to the hotel. What sort of problem is Stella? We can't do without Jay; but he's right, he can't leave. Is there any way out of that? And what is all this about Stella? As for the convention meetings, which he had come to attend, it looked as if he wouldn't get to many of them. Peter took a sleeping pill and went to bed early.

Mrs. Oates opened the door to Dr. Welles at nine o'clock on the appointed morning.

"I sent the others off on an all-day picnic," she said as she ushered him in. "My husband was up until midnight night before last, telephoning and sending telegrams. He says to tell you he has been investigating you, and you seem to be all right."

I forgot to ask them not to tell anyone about the children, moaned Peter inwardly. Well, I suppose it was sure to get out sooner or later, but—

"We don't want you to make any mistake," Mrs. Oates continued. "We love Stella like she was our own. I took her when she was a little baby the same age as my Polly and I meant to raise them like twins. But Stella was a different kind of child. Still, that's no matter. We've no more wish to be rid of her than any of the others, except if it's for her own good. Ralph says you told him to satisfy himself about you, and he's doing it."

Yes, but why didn't I think to ask him not to tell why he wanted to know? Peter groaned behind a smiling face. Oh, why didn't I say it was a high intelligence school, and say nothing about the parentage of the children? But how then could I have known anything about Stella? Obviously nobody thinks she is very intelligent. She, like Tim, keeps her intelligence concealed. Peter suffered a wave of horror as he realized that he had, as yet, no proof that all these children were gifted. Then he told himself that Tim, Elsie and Jay surely were, and—what was the woman saying?

"... But I told him maybe you didn't want your affairs talked about, the school and all, or the children's affairs, their parents or anything, so he never said a word about it."

"Thank you, Mrs. Oates," said Peter in heartfelt relief. "It is true that we do not wish a premature revelation of our plans. Only those most concerned should know about it. We hope to give as little publicity as possible to the school and its pupils. It is not good for children to live in the spotlight." I'm babbling, he told himself, and stopped.

"Well, I told Ralph it's for you to say what you want told, not us. He has a friend in the police department and a friend on a newspaper here. They got in touch with the Oakley chief of police and the superintendent of schools, and asked about you and that other doctor and the teacher you mentioned, and about the Davis people, too. They got night letters and phone calls all day yesterday, your description and your photograph even; I believe they said somebody might be posing as you here and asked if you were here. I hope you didn't mind all this, Dr. Welles, but we had to be sure."

"Certainly you had to be sure. I hope now I can use you as a reference when I contact guardians of other children."

"Ralph said to tell you," continued Mrs. Oates, "that if you'd rather take her when you go, and board her with Miss Page, that would save her taking the trip alone so far. We can pay her fare and her board bill, and her board at the school too, if she can have her tuition and books free like you said. It seems awful sudden to me, but Ralph said you spoke as if you might like it that way. She can always come straight home to us if she doesn't like it there. I wouldn't have it any other way."

"Certainly. And she shall write to you faithfully. But how does Stella feel about all this?"

"The child is wild to go. She keeps saying you're sent to her, whatever she means by that. Of course, she may change her mind again for all I know. She shan't be sent away from here unless she likes. Now, I'll call her; or was there anything else you want to say to me?"

"Only to ask that you allow her to be alone with me for the tests. They are partly psychological, and—"

"I understand that. A child's always dis-

tracted if people stand around and watch. What are the tests for? To show she's up to her grade in school?"

"Yes, and to find out where her chief interests and abilities lie, and how well balanced she is, and things of that sort."

"She's up to her grade all right, and in some ways beyond; but she doesn't take a real interest in her studies. She's quick, though, and she has a wonderful memory. There now, she's coming. Come in Stella. Now you be a good girl, and do what Dr. Welles says, and I'll be in the laundry room if you want me, or the back yard."

As soon as her aunt had gone, Stella sat down opposite Dr. Welles and asked, "You were sent to me, weren't you?"

"Well, I'm here," said Peter. "I think that is enough for now."

Oddly enough this seemed to satisfy Stella, even to please her.

But when the first pages of the Army Alpha test were set before her, Stella waved it away.

"Puzzles and games like that bore me," she said.

"Have you ever taken a test like this at school?"

"They gave us one once. I couldn't be bothered with it just then."

"The hard parts do take effort," said Dr. Welles.

Stella stared at him.

"What hard parts?" she asked.

"What did you do with the test at school?" asked the psychiatrist. "Push it away like this?"

"Oh, no. You can't do things like that at school. I put down answers to some of it. But really I was writing a poem, so I couldn't take time to bother with puzzles just then. I have to write poems when I'm in the mood."

Peter took a deep breath and counted ten.

"Are you writing a poem now?"

"No," said the child, her eyes wide.

"If you want to be in my school you must pass my tests," he said.

"But . . . but I thought you *knew*," and the girl looked alarmed.

"I do know," said Peter. "I know a great deal more about you than you think I do. But we must have some proof."

"Then it isn't because I'm an orphan and somebody wants to be kind to orphans like me. I thought I was right about that," said Stella. "It's something

else you want to prove about me. How my parents died is only an excuse."

This speech, confused though it sounded, brought hope to the doctor again. For the first time in this extraordinary interview, Peter felt able to talk to her.

"You have, I believe, a very superior intelligence," he told her. "That is what I want to prove, using several standardized tests."

"Oh well, if this must come first," said Stella. She picked up the pencil, and Dr. Welles looked at his watch.

"Fifty minutes is par," he said. "You can do it in much less."

And Stella did.

"Shall we take another test, or talk a little first?" said Peter when she had finished.

"I'd rather talk. What are the other tests?"

"One of the Stanford-Binet superior adult tests, a Rorschach, and the Bellview-Wechsler test, and a personality-quotient test."

"I hope they'll be more interesting. Now will you tell me what you came in for?"

"I think you know enough right now," said the doctor. "Let me find out more about you, Stella. Tell me about yourself. How old are you? Fourteen?"

"I'll be fourteen in October."

"You have lived with your uncle and aunt all your life. Is your health good?"

"Yes."

"Do you sleep well?"

"Yes."

"Do you dream very much?"

Stella hesitated, and said she did not dream; but this was an obvious fib.

"Are your uncle and aunt good to you?" asked the doctor.

"They mean to be."

"Your cousins?"

"I guess so."

Peter asked a number of ordinary questions until Stella was answering freely and then he tried a surprise question.

"What is your pen name?"

"I thought you might know that," she said.

"I know you write. Poetry, isn't it?"

"I'm Estelle Starrs."

Much suddenly became clear to Peter. Among poets, Estelle Starrs was most frequently compared with Emily Dickeson; among novelists, with Marie Corelli. Her first novel had not had a very wide sale,

and the second was newly published. Peter had not read them, but he had heard his big brother practitioners discussing them with considerable professional interest. "The Star Child" had provoked much argument; and "Incarnation in Egypt," one authority had remarked, must have been written by a slightly wacky wife of some expert Egyptologist. Naturally nobody had dreamed that the author was a girl of thirteen.

"Who knows you write these things?"

"Nobody. Not even the publisher knows who I am."

"How do you collect your money?" asked Peter.

"They keep it for me," replied Stella placidly. "I couldn't spend it, could I? When I am grown up I can get it. I wrote them I would ask for it when I wanted it."

Peter Welles opened his suitcase again and laid some papers before her. But again the child hesitated.

"I can't take this," she said.

"It's a personality quotient test," he said. "I want to find out what sort of girl you are, your tastes and all that. You can't possibly fail. There are no wrong answers."

"I know what answers I ought to give," she said. "Anybody can see what is wanted. I can't take it and be honest. You'll find out what I am like soon enough."

There was something to that, Peter conceded.

"Just ask me questions yourself, instead of this make-up test," she suggested. "You can tell without asking, can't you?"

"I can tell you some things about yourself," he agreed. "Let's see how well I can do it. Pretend I'm a fortune teller at the beach. You believe that nobody understands you, that it is your destiny to live alone forever, and that you will not be appreciated at your true worth until after you have been long dead."

"I feared that might be true," said the child gravely, "but now that you have come to me, won't everything be different?"

"If you come with me, things will be better for you," Peter replied with equal gravity, "but it may take time."

He put away the test she had rejected, and took out the Rorschach cards. Stella enjoyed this test and chattered freely during it.

"I notice," said Dr. Welles, "that your

answers show, as your books do, an interest in Egypt and India and the Orient generally. Isn't this an unusual interest for a girl of your age?"

"Perhaps."

"How did you come to take a special interest in things like this?" he asked.

The child replied stiffly, "It is not permitted me to tell."

The psychiatrist tried another tack.

"How can you tell me about your books, when you can't tell even the publisher?"

"I knew you would believe me," said Stella.

"Wouldn't your family believe you?"

"Possibly. But they would not understand," said the child, with marked distaste.

"How do you get along with your family?"

"I live here as a stranger," said Stella.

"You mean they don't understand you?"

"Of course not. And I have no sympathy with them. We are too different."

Mrs. Oates knocked at the door and called them to lunch. The little girl ate well and normally, and washed the dishes while the psychiatrist talked with her aunt. Then the questioning and testing of Stella was resumed. By the time he was ready to leave, Dr. Welles was satisfied as to Stella's intelligence, and he phoned the airport for a reservation for her on his plane four days later. She was certainly one of the Wonder Children, and she needed his help.

After supper, at his hotel, Peter wrote up his notes. Birth, normal. Infancy, normal. General health, good. Not a "nervous child." (Jay's record would probably be the opposite in that respect.) No serious illnesses. No delusion of persecution, but strong feeling on both sides that Stella did not fit in with the rest of the family. Stella admitted to having had childish fancies, years before, that she might not be related to them at all, but said she now knew better than to think she could be a changeling, a fairy princess, or royalty in disguise. She was sure that she really was the child of Ralph Oates' brother, and thought perhaps her own father and, especially, her own mother, might have understood her better. "Though not entirely," she added.

"Why do you think they would?"

"My uncle understands me better than the others in this family," explained Stella. "So

his brother, my own father, probably would have understood me better yet. My aunt isn't really related to me at all, by blood, and her children take after her. I suppose I must take after my own mother."

"Why wouldn't your own mother understand you entirely?"

"I just don't think she would," replied Stella firmly. And on this she refused to elaborate.

As regards her emotional state, Stella said that she was happier than she had formerly been, since she had begun to have things published, but that she had never expected to be truly happy in such an uncongenial environment.

"My uncle tries to be sympathetic, and sides with me all he can," she said, "but I don't think he really tries to understand me much."

Stella admitted to "seeing things" in the hypnagogic state, but said they "usually don't mean anything. It's like dreaming, only I'm not quite asleep." She showed no sign of any hallucinations, illusions or delusions, and admitted to no more obsessions, phobias and compulsions than are normal in an imaginative, lonely youngster. Her frankness in discussing these matters spoke well for her. She had excellent powers of observation, and could reason nimbly when she chose to do so, but her reading had been very limited because, as she explained, children under sixteen were not allowed in the adult section of the library at all. Stella was, therefore, limited to the books she could borrow from friends or ask her uncle to get for her. She was overjoyed to hear that in Oakley she could choose books freely from the adult sections.

When she was asked what she would pack to take with her—Dr. Welles' idea being to check on the practical side of her nature—Stella promptly named the necessary articles, described her clothing in terms of summer and winter weight, asked about the climate to which she would be moving, and then suggested that Peter look over her dresses to see which would be suitable to take.

"Your aunt will know that," he replied.

"Please," begged Stella. There was a new look in her eyes, and anxious lines in her face. For the first time she seemed nervous. Obediently, the doctor rose and followed her.

Upstairs in her room, with the door shut, Stella turned to him, and said in a fierce whisper, "You won't tell?"

"No," he assured her, mystified.

"She'll see if I pack them. Please, will you take them—now?"

"Oh! Manuscripts?" he guessed.

"Yes, and notes. If you move that chest of drawers quickly—there's a loose board underneath it, if I pull out a nail. There." And she knelt, reached in under the floor and produced a bundle wrapped in newspaper.

"May I look?" Peter opened the wrappings and picked up a thin sheaf of papers, fastened with a paper clip, top sheaf of a dozen or more.

"'Mercer's Ethiopic Grammar, with chrestomathy and glossary,'" he read in an awed undertone. "What is chrestomathy, may I ask?"

"It's from the Greek *chrestos*, useful, and *manthanein*, to learn," replied the little girl. "It means extracts from books in a foreign language, with notes, so you can learn."

She reached under the floor boards again and produced a second bundle and a third.

"That's all," she said. "Notes, and a few manuscript poems. Put them all in this brief case—it's my school case, but my aunt will think it's yours. She doesn't notice very much."

Stella indicated the books in the small bookcase by her bed.

"These are story books and poems and things. May I take the books?"

"Your uncle can ship them to you." He could see some of the titles; Stella's three books were there. Her poems were called "Sheaves of Stars."

"Shh! Here's my aunt," said Stella and Peter thrust the three bundles of paper into the brief case, while Stella snatched a dress from the closet and held it up before him.

"You'll need some fairly warm things for next winter, and for the cool nights even now," he was saying when Mrs. Oates opened the door.

"I'll see to it," said Mrs. Oates. "I was going to make the girls some dresses this summer; I'll send Stella's to her as fast as I can finish them."

Peter Welles, pondering all these things in his hotel room that evening, added a line to his page of notes, and opened the brief case.

"A Conversation-Grammar of the HUNDUSTANI Language," he read. "BIBLICAL HEBREW." "Introduction to LITERARY CHINESE." "ARABIC LANGUAGE AND GRAMMAR." "AN ANGLO-SAXON READER." "MODERN PERSIAN READER." "A Short Grammar of

Attic Greek." There were more, but Peter felt unable to face them. He opened the second package. "E. Naville's 'The Ancient Egyptian Faith,'" he read, "Breasted's 'History of Egypt from the Earliest Times to the Persian Conquest.'" There were notes about India, Tibet, Babylon, Persia. Peter looked no more. With a slight shudder, he returned all the notes to the brief case and closed it firmly. Stella should carry it all the way across the continent with her own hands. All those pages of notes in a careful, minute handwriting must have cost long hours of hard labor in secret. These were the odd books she "just wanted to glance over" in which "no child could possibly be interested." These were the source materials for her books.

Peter attended the rest of the conferences he had come to attend. He telephoned Stella daily, but did not see her again. A telegram to Miss Page telling her to expect the child was followed by a letter giving the story. Peter met Jay almost daily, and talked to him about all they were doing and planning to do, but he did not tell the two children anything about each other. Jay, throbbing with eagerness to hear all that Dr. Welles would tell him about Tim and Elsie and the school, exacted a promise that Peter and the others would write often to him, but steadfastly refused to think about attending the school. It was, he said, impossible, and there was no use in thinking about it.

In the taxi to the plane, Stella asked a question.

"The other children—are they anything like me?"

"Not very much," replied Peter. "I hope you will like them and get along with them as well as you can. But I don't think they will share your special interests to any great extent."

Stella, who had been looking puzzled, looked even more so.

"What do we have in common?" she asked. Peter signed her to silence, but at the airport he walked with her to a place where they could not be overheard and began the explanation and the warning he realized she must be given.

"We are trying to gather you all together because most of you have had difficulty in adjusting to the world of normal children. Naturally the tastes and interests of each child are personal and different from those of the others. Tim and Elsie and you are as unlike as children can be, except that you all have exceptionally high intelligence. You

should be able to adjust to one another if you make the effort, and you can learn from one another and teach one another. It is probable that you all have a wide range of interests, although your special interests are different there must be many things you can share."

Stella looked bewildered, then extremely thoughtful, and then she nodded. What was going on in her mind was more than Peter could guess.

"I'll leave it to you to tell them as much or as little about yourself as you choose," he said. "There is, I know, much that you have not told me."

Thus warned, Stella said little about herself to Elsie or to Tim at first, and even less to Miss Page and to Dr. Foxwell. The children read her published works with some mystification, and she read theirs.

"Tim certainly can do almost everything," she confided to Dr. Welles. "He knows something about almost everything, too."

"But you know more about the Orient and about Africa," he replied.

"It's right what you told me about their having different interests from mine."

"Your interests will widen, no doubt," said Dr. Welles, "and so will theirs. It is good that you have different specialized branches of knowledge to share with one another."

Dr. Foxwell, after this first meeting with Stella, and recalling Peter's letter concerning her, had made a dire prediction that when Stella and Elsie were brought together, the ringing clash between the two personalities would probably resound for several miles. But Elsie was making tremendous efforts to overcome her faults, particularly her tendency to outspoken criticism of everything which differed in the least from her own notions, and she was determined to get along with the other Wonder Children or die in the effort. Stella's habits were rather toward withdrawal than toward violence when she was not "understood," and as for Tim, nothing human was alien to that ardent would-be psychiatrist. To all three children, what really counted was that they had found others of their own age who were of the same mental level, and they were eager to share their interests and to help one another. Their clashes were indeed frequent, and misunderstandings rife, but the bond which bound them together was stronger than their differences.

Dr. Welles was conscious that Stella had something on her mind and that she was



trying to think something out. It seemed that until she had done so she was avoiding any definite statements except those of indisputable fact. She often stared at the others as if puzzled, and they seemed puzzled about her.

For the first fortnight, Dr. Welles made no effort to quiz Stella, but left her largely to the society of Elsie and Tim, and observed her as much as he could. Offered her choice of a pet, Stella said that since all the others were breeding cats she would be content with only one of her own, and she chose a coal-black, short-haired, green-eyed tom which she had neutered. She named it Hegai; and Peter Welles had almost as hard a time tracking down that name as he had in identifying the Grigio for which Jay's guardian's guide-dog was named. Stella and Elsie went almost daily to the main library and returned loaded with volumes. Miss Page privately kept a list of the titles.

"There is no point in the reading that I can see," she reported to Dr. Welles. "Stella is going on a sort of reading jag, reading anything she lays her hands on; and Elsie is going through the library and reading everything they didn't have in the library in her home town. They each read most of what the other brings home. I should think it would give them both colic."

"And are they getting enough exercise and play?"

"Oh, yes, I see to that. And Tim comes over nearly every afternoon, or they go to play with him."

Elsie spent one evening a week with Dr. Welles and one with Dr. Foxwell. Tim no longer had professional consultations with the doctor, and both of the doctors were extremely busy, for Peter had not yet given up his work with his patients, and Dr. Foxwell was occupied with business affairs connected with plans for the school.

"How do you get along with Stella?" Dr. Welles asked Elsie one evening.

"All right," said Elsie, "Sometimes she makes me mad, though. She did today."

"Tell me about it."

"We read each other's stuff, of course," Elsie said, "and when I showed her a sonnet sequence, she said it was wordy and stylized. *Wordy!*"

"I haven't had time to read any of her poems yet. What are they like?" inquired the psychiatrist.

"She has a new one she calls 'Figures.'

Figures of speech, she means. No rhyme, nothing much to them. Just little short things."

"Well, I suppose a person who calls sonnets 'wordy' would have to write very short things," smiled Peter. "Can you repeat one?"

Elsie struck a pose and declaimed:

"Branches of trees outstretched—  
Your arms.  
I am a timid bird  
Huddled in them."

"Is that all?"

"The rest are like that. Or worse. So, of course, I didn't show her my new sequence, the *Summa* one." The last sentence was sarcastic.

Elsie and Tim had been reading the *Summa Theologica*. Tim, as the psychiatrist knew, was most impressed by its mathematical quality, and kept saying that it ought to be possible to reduce it to equations, if one could but find the right symbols. But Elsie saw it as work of art, each question-section as concise and disciplined as a sonnet; and she was actually engaged in turning out examples of what she meant—each objection expressed in the octave, the reply and answer to the objection in the sestet. This exquisitely difficult task was her most cherished secret; no one knew of it except Dr. Welles.

"And how is the *Summa* sequence getting along?"

"Terrible!" Elsie's eyes were bright with enthusiasm. "I have to set every word in place like . . . like God setting the stars in the sky. I'll never get even one of the sonnets to suit me. It's better poetry in the original. But it is fun to try."

What odd definitions these children had for *fun*, mused Peter.

"I remember another of Stella's things," said Elsie, and she repeated it:

"I am the dull earth,  
You are lightning,  
Tying me to heaven  
An instant."

"She does it well," said Peter, with some severity. "You can't say it is not poetry."

"Yah!" said Elsie, with great simplicity. "She gets a good idea or phrase and she throws it on to paper and that's all there is to it. She doesn't work with it, that's what is wrong. But what can you expect? She believes in inspiration."

Her head held high, Elsie left the consultation room, and the psychiatrist was left with his thoughts.

After a few minutes he picked up the telephone and called Miss Page.

"Hello? Peter Welles speaking. I think we'd better give the children a little studying to do this summer. . . . No, nothing burdensome. . . . An essay to read together and discuss was what I had in mind. . . . Yes, you're right, there's a reason for it. . . . Poe's 'Philosophy of Composition' will do to start with."

"How he wrote 'The Raven'?" Miss Page's voice came over the wire. "It will be worth the price of admission to hear what they say about it."

"Give them each a copy tomorrow after supper, or as soon as you can get three copies," Peter directed, "and let me know beforehand. You and I have some work to do while they read."

So a few evenings later, Dr. Welles and Miss Page ostensibly busied themselves with plans and calculations at one end of the living room, while the three children, curled in easy chairs or sprawled on the floor, read the essay and exploded into talk. Never was a man more thoroughly disagreed with. And yet it soon became apparent that there was considerable disagreement among the children themselves. "It depends on just what he means," they often remarked, but they doubted whether masterpieces were often written backwards, and even more did they question whether Poe actually wrote as he said he did.

"I think he rationalized it afterwards," Tim insisted, while Elsie was inclined to think the essay an elaborate hoax, and Stella considered it a defense against "those fool people who kept asking you how you do it, and wouldn't understand if you told them."

All of the children jeered at Poe's remarks about Beauty, not even Stella being willing to concede that Beauty makes one weep. Tim stoutly maintained that death is not a very melancholy topic to a Christian, and Elsie couldn't see anything beautiful about the loss of a loved one, "especially if you howl about it all your life." To the surprise of the listening elders, all three children thought that Poe greatly exaggerated originality.

"Only people who don't know much and have never read much think you can ever be original," said Elsie.

"Yes, almost everything possible was

done or thought thousands of years ago," agreed Stella, "in a literary way, I mean."

"It's a sort of pride, I think," Tim mused. "As if to say, nobody else in all creation has ever had a mind as good as mine; I can think of things never thought before."

"Well, he does admit that it's only the combinations that can be original," Elsie pointed out. "Like his stanza form."

"Yes, but I bet that could be duplicated if you hunted long enough," said Tim. "Let's keep our eyes open for that kind of stanza when we read."

"Poe tries so hard to be gruesome that half the time he's only funny," Elsie said.

"The silly old raven would soon starve to death sitting on that bust," giggled Tim. "I think the poem is much too long, too; and the refrain dates it."

The girl disagreed with him there. There were times, said Elsie, when a refrain belonged in a poem, even though it had been done to death in some periods.

"But the whole essay is all wrong," said Stella heatedly. "It makes it all so mechanical. We couldn't write that way, and I don't believe anybody could."

"Maybe if they didn't write anything very good," said Elsie. "'The Raven' isn't really good."

"I should think you'd be too busy with the mechanics to accomplish anything," said Stella. "And he doesn't say a bit about imagination."

"I read something else of his once," Tim frowned as he tried to remember it, "how he chose the name Lenore by choosing the most musical consonants and vowels and combining as many of them as he could in one name, or something like that."

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The girls shouted.

"Well, if he doesn't know how to write without all that rigmarole," Elsie said violently, "he's not much of a writer."

"He doesn't claim to be inspired," said Stella.

"But he's always talking about intuition," said Elsie, "and he doesn't much like it."

"What is intuition?" asked Tim briskly. "And inspiration that some writers used to believe in—do you?"

"Of course I do," said Stella indignantly. "That's how I know Poe wasn't really a poet. He doesn't even know what inspiration is. He works like a robot."

"Well, I don't know what it is, either," retorted Elsie, "I just work until it comes out right. And I don't work like a robot at all."

"No, of course you don't," Stella said. "But I think you work over things too much," she added kindly. "Why don't you put your things down as they come, unspoiled?"

Elsie gaped at her.

"Just raw?"

Tim, who had never written poetry, was intensely interested. The adults, who had been completely forgotten, had long since given up the pretense of work.

"You don't write the way he says, do you?" demanded Stella.

"No, of course not," replied Elsie, "but I don't claim to be inspired. What do you think, Tim?"

"Well, isn't it possible," said Tim, with an excellent though unconscious caricature of Peter Welles' professional manner, "that Poe really did go through all that he says he does, very rapidly indeed, and then went back and analyzed it and described it as if it had been deliberate and purposive? Your thought processes are so rapid, Stella, that you probably don't know you think at all, it seems to come in one burst."

"I know it's inspiration," said Stella firmly. "I write poems that aren't like anything I ever thought. They come to me. I woke up one night last week and wrote a long one and it amazed me. It wasn't at all like anything I had ever thought in all my life, and at first I couldn't even understand it. But it had great meaning for me—although maybe not for anyone else."

"If it had such great meaning for you and for nobody else," said Elsie, "it must have come from something in yourself—your own experiences and thoughts—so it couldn't be inspired from outside yourself."

"Like dreams," suggested Tim. "Sometimes you can't figure out where they come from, but . . . Peter can tell us!" he cried confidently, remembering the presence of the grownups. And the children all rushed across the room, shouting questions in chorus.

"Professionally, I know nothing about inspiration," Dr. Welles answered. "My patients do sometimes suffer from hallucinations in which voices speak to them; but you mean something rather different. Miss Page, may we consult your dictionary? Ah. Here we have it. From *inspirare*, to blow upon or into, to breathe into. 'To fuse or suggest ideas or monitions supernaturally; to communicate divine instructions to the mind.' In this sense we speak of the writers of Sacred Scripture as inspired. They wrote under the guidance of God."

"That wouldn't apply to our poetry, surely," said Elsie to Stella, who flushed hotly and made haste to agree.

"To infuse ideas or poetic spirit," read Peter. "It doesn't say by whom this is done. Who or what inspires your poetry, Stella?"

The child looked stunned.

"I don't know. I never thought about that."

"Well, I don't understand about the Bible," began Tim, but the doctor silenced him.

"Leave that for now. It is irrelevant. Well, Stella?"

As Stella did not answer, Elsie took it upon herself to do so.

"I should think that's the whole point, *who* inspires you," she said. "I wouldn't want to be dictated to by just anybody or anything. It might be a hallucination, or a demon, or my own imagination. I think it's just ideas that come into your head and you don't stop to think where they come from, but they all have a natural explanation."

"Might be largely unconscious or subconscious as in the case of dreams," suggested Tim. "Then it would be hard to track down sometimes, as dreams often are."

"Yes, and if you get a good idea you don't stop to fret about the psychology of its coming, you just grab it quick before it gets away," Elsie volunteered. "What about intuition, Dr. Welles? Do you know?"

"About that I think I do know and can explain. There are, in what Jung calls the psyche, four basic functions, of which intuition is one."

"The psyche? Does he mean, soul?"

"More or less. Jung's term also includes the unconscious. Terminology differs considerably. Poe referred, you notice, to . . . where's the place . . . 'the object Truth, or that satisfaction of the intellect, and the object Passion or the excitement of the heart.' The scholastics say that the soul has intelligence and free will; the intellect seeks to know, to grasp the truth, while the will desires happiness. Love resides in the will."

"I thought love would reside in the emotions," interrupted Elsie.

"Depends on the definition," Tim said promptly.

"It is impossible that the human will be deeply moved by an object, says St. Thomas Aquinas, without passion being aroused in the sense of appetite. Spiritual love flows from the will, and the emotions and sense appetites follow along with it. In all these matters we must understand the words as they are meant, and recognize, on the one hand, identity of thought under difference of terminology, and, on the other hand, difference of thought in many cases where the words used are identical. The word love, for example, has many meanings."

Miss Page marveled anew at the children, who were drinking it all in with concentrated interest.

"What Jung calls 'thought' corresponds to what Poe and the scholastics call 'intellect' and others call 'reason,' and this function evaluates by means of cognition from the viewpoint 'true-false.' If that clear?"

"Yes. Go on," chorused the children.

"What Poe calls 'passion' and the scholastics call 'the will' is what Jung calls 'feeling' which evaluates by means of emotions, he says, from the viewpoint 'agreeable-disagreeable.' We choose, or love, or desire, what seems good to us, in other words."

"Morally good?" asked Tim.

"Any kind of good. Good art—good pie—a good time. The will chooses a thing under its aspect of good, invariably—because of the good in it. It may be morally bad to take a pie, but you may take it because it is a good pie. Now the two functions of the psyche are called rational functions, because they deal with values. Sensation and intuition, on the other hand, are called irrational, because they work with mere perceptions. Sensation takes things as they are, without valuing them or thinking about them."

"But people do think about—"

"Yes, but that's using another function, you see. The sensation type of person will look at a picture or a landscape and see the details—name the trees, the colors of the different flowers, and all that; or he notices an event in the same way, but not the significance, the meaning of things. Such a person in an art gallery will count the cherubs flying about a saint's head, and think you are lacking in observation if you cannot tell how many there were. Intuition also perceives, but in a special way, seeing the inner meanings and the potentialities of things, getting impressions rather than definite, photographic details. Where's the dictionary? Oh, yes. 'The act of knowing by direct perception or comprehension, without reasoning or deduction; a first or primary truth; insight; apprehension.'"

"But if it concerns truth, why is there no reasoning or deducing?" Tim wanted to know.

"The axioms, and so forth, which are prerequisite to the reasoning process, must come from somewhere," explained Dr. Welles. "Self-evident truths, as we sometimes call them, are too simple to be demonstrated. The axioms of geometry, the first facts such as 'I exist' and 'I think' are known directly. You'd better all have a go at a textbook on Criteriology—Glenn's is on my shelves somewhere. This is the study of the tests and norms by which one may judge what is true and certain in human thinking, reasoning and knowledge. Now, to get back to intuition as it is often used the word refers to a guess, hunch, or even an impulse which may be false or evil. You may think you know intuitively that you can trust a certain person, and he would steal your last cent. I'm not the intuitive type myself. But a thing may be perceived intuitively and then checked by reason. There are men of the intuitive type, of the thinking type and of the intuitive-thinking type. Similarly a thing may appeal to the senses and then be rejected by the will. The pie which would be taken at the dictation of the senses because it is good to eat, might be rejected by the will, which seeks a higher good, a moral good. We might go into all this at length"—Dr. Welles glanced at the clock—"but I see it is time for Tim to go home, and rather too near bedtime for you girls."

"Imagination," pleaded Elsie. —"What's that?"

"Just very briefly," wheedled Tim.

"Oh, imagination is the power by which

we recall or project images of things the senses have perceived. St. Thomas says it is the ability to picture material things in their absence. Jung calls it a creative power which brings up an image out of the material of the unconscious. You can not imagine what you have not first seen, but you can combine different images into one. If you wish to imagine a mermaid, you combine a woman's upper part with a fish's tail. Or if you try to imagine a scene on Venus or Mars, you might think of a plant shaped like grass, the size of a tree, colored like the sky, with a flower like a cat's head, having eyes like a bee and feelers like a snail. Do you understand me?"

"You mean we can't imagine anything?" cried Stella.

"It's like Poe's originality—only the combinations can be original?" Elsie exclaimed.

"Of course, a man born blind can't imagine red or blue," said Tim. "Try imagining a new color. Go on, try."

"Well, think it over and read up on it," advised Dr. Welles. "I'll lend you books if you like. Good-night, all of you, please! Miss Page and I will finish off our work here."

The girls went up to their rooms, and Timothy left the house.

"What in the world will they make of all that?" Miss Page wondered.

"Tim understood, and Elsie got most of it," Dr. Welles replied. "What Stella thinks is the question. I'll let it all soak in for a while, and see what comes of it."

"They are all so different."

"Yes. And Jay is unlike them all. He tells me in his last letter—I forgot to bring it along—that he has learned several languages. It seems that when his aunt first began to read aloud to his uncle, because of Mr. Curtis' failing sight, Jay demanded lessons. His aunt gave him a month's instruction with special emphasis on pronunciation, and after that he could read German aloud and said he wanted to learn another language. Apparently they still think he does not understand what he reads and has merely learned how to pronounce the words to help his uncle, as a singer learns to sing in several languages without knowing or caring what the words mean. Actually he reads German, French, Latin, Spanish and Italian perfectly, and is eager for a chance to try speaking and writing them."

"How Tim would love to be with Jay!"

"Yes. We must think of some way to get

Jay here. We need him, and I think we have much to offer him, too."

"If he would come, under the circumstances, I wouldn't want him," said Miss Page.

"That's the problem," said Dr. Welles.

"Hello, Stella."

"Hello, Dr. Welles. Miss Page said you wanted me."

"Come right in." Peter offered her a comfortable chair and set a dish of candies temptingly close while he talked. "I plan to have private talks with each one of our pupils fairly often, and help you with any problems you may have. Now that you have had a while to get settled here and get to know us all, we may as well begin our talks."

"Yes, sir."

"Is everything going all right? Are you happy?"

"Oh yes, Dr. Welles," replied Stella. "It's so interesting here. Miss Page is so good to me. And I can read all I want to."

"No troubles at all?"

"No, none at all."

"What have you been thinking about lately?"

"I've been thinking about what we were all saying about inspiration, and Tim gave me some books to read about dreams and their origins," Stella said, "and I think you must be right. We've been talking it all over. One thing I like best," she added in a burst of confidence, "is that even when they don't agree with me or understand me, they never act mean. I wrote a poem in which I compared myself to a timid bird, and my cousins or any other kids I ever knew would have chased me around for weeks yelling, 'Hey, timid bird!' and making all kinds of fun. But Elsie knew what I meant, even if she didn't care for the poem. She's quite blunt, but she takes things the way they are meant. And Tim is awfully kind. Even when they call me crazy, they don't ask as if they're glad of it."

"Then you have no problems to set before me right now?" said Peter, making no comment on this innocently revealing speech, and giving no sign how much it had moved him. "Let's talk, then. Suppose you tell me, what is your philosophy of life?"

Tim would instantly have demanded a definition of the phrase. Stella only looked thoughtful.

"I never formulated one, I guess," she said. "I have to think about it. I never heard that expression before."

"Would you say your philosophy is simple or complex?"

"Fairly complex, I think."

"But don't you think a simple philosophy would be easier to apply?"

"Well, yes, but one must begin with a complex philosophy, because life is so complex, and the philosophy must fit it," said Stella carefully. "Perhaps it will simplify after a while, when I understand things better."

Dr. Welles nodded slowly three or four times.

"Suppose you tell me how you account for your being so different from your cousins and from other children."

"Right now I'm not sure about that. Tim says it's the radiations. But I don't understand such things. I had a theory worked out, but—" Her voice trailed off into silence and she looked doubtfully at Peter.

"I'd like very much to hear it," said the psychiatrist.

"I'm not sure you would understand."

"I'll try." Humanly speaking, there was nothing Peter Welles loathed so much as a person's assuming that he or she was too wonderfully unique to be understood. Professionally he was used to it.

"Timothy said that if nobody else thinks the way you do, you must be wrong."

"Well, suppose you tell me what your theory was, and how you came to formulate it, and what reasoning and evidence support it, and what is against it," suggested Peter encouragingly. He scratched a match and gave his attention to his pipe for a moment. The child spent the moment in concentrated thought.

"Cutting out inspiration made things a little simpler," she said, "but there are still so many complications and alternatives; perhaps you can help. I'll try to tell you. Where to begin?" she murmured, and then plunged in. "I guess it began when I was first taken to a museum. Pete was taking ancient history in school and Pat had to visit local points of interest, and my aunt took Pokey and Polly and me along. They ran around saying, 'Isn't this funny?' and laughing like anything, or else they were bored stiff and wouldn't look at all. They chattered and squealed so—"

"I know," said Dr. Welles, when Stella paused and gave him a look that begged understanding.

"Either they all ran off and left me, or I slipped away, and there I was alone, wandering around in the great dark rooms and able to look quietly at everything as long as I liked."

"Dark?"

Stella frowned and tried to recapture the scene.

"They seemed dark. There was light to see by, of course, but it was shadowy. There were mummies and vases and things, and I wandered around for what seemed like a long time. Then I found myself before a great piece of stone with writing on it that I recognized as Egyptian. It was high and wide and solid, and for a flash I could remember it all. I knew I had been there, in Egypt, and had seen it many times before."

The child had lived the moment again as she spoke. Then she looked up, defiantly yet fearfully at Peter, who pulled silently at his pipe, his face without expression.

"That was the beginning," said Stella, and she waited for comment.

"Go on."

"Then I went into other rooms and saw other things. It was the same with cuneiform, almost. I almost remembered how to read it, although I could not remember seeing those particular inscriptions. Then the others found me and we went home. Oh, how they always chattered. So silly. Anything even a little bit different they thought was funny and would scream over it. Pat used to take care of children and she would show them pictures and say, 'See the funny man. He's all black. Isn't he funny? Look at the man with feathers on his head. Isn't he funny?' and if they passed a Chinese on the street they'd nudge each other and say, 'Look, look, isn't he funny? What's funny about that?'"

"Nothing whatever," said Peter, with such unexpected warmth that Stella took heart and went on.

"Then I asked my uncle about books on ancient times and places and languages and he would try to get whatever I wanted. He asked for story books first and when he brought me Haggard I was sure I was right. He took me to the museum again, without the others. At the library we got books about the different



languages and I began to learn them again."

She seemed to expect comment, but the psychiatrist's nod was non-committal.

"I got books in Arabic, Chinese, Hebrew, Greek, Hindustani, Sanskrit, Anglo-Saxon and Sumerian."

"Sumerian!"

"Yes. C. J. Good's 'A Sumerian Reading Book.'" Stella's eyes were shining. "Some of it is in cuneiform script."

"I see. Go on."

"So I came to work out this theory. I couldn't see that things made sense any other way except that I must be reincarnated and have a sort of memory of these other lives, unless I was inspired, and now I'm pretty sure it's not inspiration. Other boys and girls had no interest in these things; why should I have? They didn't think about things like life and death and time and personality and other religions—or even their own religion. How could I be so interested and know so much, and learn so fast, if it wasn't partly remembering? And stories I read backed me up? Kipling and—"

"Is there no other possible explanation?"

"I can't think of any. The other children wouldn't agree with me, I know, but I think they are the same as me only they don't know they are remembering anything."

"Do you believe this theory implicitly?"

"No," said Stella. "Sometimes I thought I was positive. Once I asked our minister if reincarnation could be true, and he said he didn't know. He said he once saw a little whirlwind moving along, and when it came to a haystack it took on a body of whirling hay, and when it crossed the road it took on a body of dust, and if it had come to a pond it would have been a waterspout."

"In other words, yes?"

"He meant 'maybe.' But the analogy didn't seem quite right to me. It's good poetry, but after all, a philosophy of life isn't only poetry. Poetry is true. It doesn't have fixed limits like material things. You can build your whole life on a lyric idea. Besides, I told my uncle and he was furious."

The psychiatrist began to like Stella's uncle.

"How much did you tell you uncle of all this?"

"Nothing. I just told him I liked ancient

history and things. He told my aunt it was an odd taste but harmless."

"You said that on your first visit you recognized Egyptian writing," said Peter, laying a little trap.

"Well, I have seen some in Pete's history book," Stella said candidly.

"Have you worked out a time schedule for the various incarnations? Is this the first one in the Americas?"

"I don't know anything about all that. I don't really remember much, if anything. It's that it all seems to come back to me as I see it again. And there is my poetry. It's beyond my years, certainly. The critics all say it shows extraordinary insight. If it isn't inspired, then I must remember from past lives, to be so much older than my years. And you said we can't imagine anything we have not seen, so that simplified things even more."

"Go on."

"That's all. What do you think? Am I all wrong about this?"

"Do you want my honest opinion, Stella?"

"Yes, I do."

"I think you have worked it all out very intelligently," he said slowly, "and I quite understand how you came to do so. But I do not think your theory is true at all. I think you wished to be away from where you were—to live away from where you lived—didn't you? And you were especially eager to get away from the others at the museum. You worked yourself into a semi-hypnotic state wandering about alone in the shadowy galleries—a half-dream state. Many people have been very deeply moved, or greatly thrilled, at seeing things from these ancient civilizations. Their antiquity appeals strongly to the imagination. Probably the history book was your first glimpse of a world beyond your everyday life. You mistook the thrill for a stirring memory. Did you ever remember anything you had not seen or read of in this life?"

"No. Not that I could prove, anyway."

"Nothing you are positive of, you mean? I thought so. The books you read and also those you wrote were an escape from what you were living every day, as far away as possible in space and time, and they were also an outlet for your creative energy and imagination, your impulse to write stories and the like. 'The Star Child' shows at least the wish to believe that you did not actually belong to the family, that you came from some other source entirely."

"I knew better by the time I wrote it," Stella said defensively. "But it made a good story, I thought."

"Of course it did. And 'Incarnation In Egypt' shows the wish to live somewhere else, in as different a world as possible. You must have enjoyed living in Egypt in your thoughts, reading and writing about it."

"Don't you think reincarnation can possibly be true?"

"It has a powerful appeal to the imagination," replied Dr. Welles. "It promises a sort of immortality to those who can think of no other; but I don't see much use in living many lives if one must forget them all—"

"One could grow in them without remembering."

"One could grow much better with the aid of memory, don't you think?"

"I have heard of a law of conservation of matter. There might be a law of conservation of souls."

"There might be almost anything. One does not multiply hypotheses without reason. Have you any evidence for reincarnation?"

"Many civilizations have believed in it."

"I know. By the way, what is your religion? Egyptian? Buddhist?"

"Of course not," cried Stella indignantly. "Do you think I pray to cows and cats and beetles?"

"Have you ever lived as an animal or bird of any sort?"

"That wouldn't have to be."

"It depends on which religion of reincarnation you follow. Why was your uncle so angry with the minister you spoke of?"

"He said it wasn't Christian."

"Well, is it? This belief is contrary to the whole Judeo-Christian revelation and to most of our philosophy. Plato believed in a form of it, and I believe Origen taught some such doctrine. If you want to take it seriously you should study the teachings in its various forms and find out which is to be accepted and why. I've always followed that hardheaded old realist, Aristotle, myself. I must admit I have never considered metempsychosis seriously. I believe it can be disproved by philosophical and psychological methods. Do you think you can prove it to be true?"

"I don't want to have an imaginary idea of myself or the world," protested Stella. "I'd much rather have a sound and true one, as you and Tim and the others think you have. Until I came here I thought religion

was just something you took on faith without any evidence or philosophical reasoning. But . . . but—"

"Let us try to build up a philosophy that you can depend on," suggested the psychiatrist. "One you can test and prove. I'll give you books to study, and you argue against them all you can." He selected a volume from the shelf. "A practical man, Aristotle; let's start with him. How is your Greek?"

"Oh, this is in both languages," cried Stella in delight.

"I believe Aquinas has some relevant material in 'Contra Gentiles,'" said Peter. "Stella, your knowledge of Egypt is really remarkable, and your books are extraordinarily interesting."

"They must reveal a great deal about me," said Stella. "Tim said you could analyze stories and poems as you do dreams. Could we do that?"

"Certainly, if you would like to," said Dr. Welles. "But don't let it discourage you from writing more about these things of which you have so much knowledge, which you have studied so thoroughly."

"If I have a sound philosophy I can write more wisely as well as live more wisely," said Stella gravely. "Thank you, Dr. Welles. I'll try to find out what can be proved."

Peter relaxed completely when she had left, and sighed in relief. One problem was off his mind. He knew what had been in the little girl's mind, and she had agreed to study under his direction. It would take months, perhaps years, to weigh both sides of the questions she had raised, but it would be good for all the children. Now there remained—

"I've got it!"

Peter jumped to his feet and dialed a number. "I want a plane reservation," he said, "at once if possible." How slow he had been to see the obvious!

"Jay? This is Peter Welles. I'm here in town. I've come to talk to your guardians, but I want your permission."

"But—what do you want to say?"

"I want to tell them about you," said the psychiatrist. "You can't keep the secret much longer; the school will unavoidably get publicity, and they have the right to know directly from us, before that happens."

"I thought of all that. But you must promise—" he hesitated.

"They may overhear what you are saying?" guessed Peter. "Do you want me

to promise I won't ask them to send you to the school?"

"Yes, that's it."

"I give you my word. I won't even mention the possibility."

"Then come."

The doctor was there within half an hour, and the formalities of his introduction were soon completed.

"I represent," said Dr. Welles, "a school for superior children which is being started on the West Coast."

"We could not think of sending Jay away," said Mrs. Curtis.

"I was not going to ask you to do so," said Dr. Welles. "I have another request to make. I have come to ask you to help us there in teaching the children."

"You must be aware that I have lost my sight," replied Mr. Curtis, "and have done no teaching for many years. I retired from that profession in order to devote full time to writing historical works, some years before my sight failed."

"I realize that, sir. But hear me out. The children I am gathering for the school are of extraordinary brilliance. Although scarcely in their teens, they have written many books and earned fame as inventors and the like, under aliases. I can prove every word I say. What we require of our teachers is a sympathy with the gifted child, and a wealth of knowledge and wisdom to share with the children. They are eager to learn; you would merely be expected to talk with them for an hour or two a day. Let me ask you, are you familiar with the name of James Vernon Worth?"

"Why, yes. His books have been read to me by my wife. But he is not a child, surely?"

"He is your son Jay."

And then Peter told them the whole story. Their incredulity was soon overcome, the situation made clear and evidence presented—chief of all the evidence of Jay himself.

"But, you rascal," protested his guardian, "when I read the first book which you say is yours, I dictated a letter to you to be sent to the author!"

"Yes, uncle," said Jay, "and it made me mighty proud, too."

"I'm not sure whether I ought to be proud of you, or whether you played me a shabby trick," said Mr. Curtis.

"You ought to be very proud," said Peter Welles. "It was not an unwillingness

to confide in you, or that he meant to deprive you of the pleasure of knowing what he had done. These children do not wish or need assistance, any more than any adult author—if as much. We must never betray their pen names. Their achievements must be kept in hiding, under aliases. But they do need to learn history as you can teach it, and I have come here daring to hope that you will do for these other youngsters what you have done for Jay."

"I made him promise he wouldn't ask you to let me go," said Jay. "But please, if you do go, may I go with you?"

"The whole thing is immensely appealing," said Mr. Curtis, "but I hardly like to consider trying to teach again—"

"Of course you'll do it, John," said his wife firmly. "You can write books as well there as here. We haven't taken root in this town forever, have we? And Jay must be with those other youngsters, but he won't go without us. Salary doesn't matter—there needn't be any. I'll teach languages, too, if you like; I'm a good linguist. We want to have a big share in this wonderful thing, don't we, John?"

"Yes, we do," said Mr. Curtis. "And thank you very much for the invitation, Dr. Welles."

So that, thought Peter as the plane sped him homeward, was that. The expense of the special trip was well repaid. He had Jay, and he had two fine teachers besides. He could start out the next month to interview more prospects, without any nagging worries about either Jay or Stella. More problems would arise, but they could be solved in their turn. Everything was under control. Peter could relax. He slept.

THE END

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# REGULATIONS PROVIDE

By RAYMOND F. JONES

*Regulations mean red tape—and red tape can strangle someone as handily as a hangman's rope. Particularly when the someone is an alien desperately in need of a spaceship repair job. . . .*

THERE is nothing that a government can do that a private citizen can't do better—except make war and spend money.

That had been the philosophy and firm conviction of Joe, senior, now dead and gone these thirty years. Young Joe Williams was himself pushing sixty, but he had never found occasion to take issue with his father's belief. Rather, with the march of years, he had become more thoroughly convinced of it than ever.

He leaned forward across his desk a moment to look from the window of his second-story office to the vast landing field in front of the building. He confirmed his first glance. The figure he had seen was that of Inspector O'Connors, red tape artist deluxe.

What went wrong with a man's genes, Joe wondered, to make a bureaucrat out of him? A deep inner necessity for dependence on the power of the group? Whatever it was made it impossible for the red tape artists to stand on their own feet, think their own thoughts, and come to their own conclusions. They were afraid to spit without the authority of public law which they could call to mind by paragraph and line.

And Melvin O'Connors was a thoroughbred of his kind, Joe thought sourly. As long as the company had to endure an Inspection Office upon the premises, why did the chief inspector have to be Melvin O'Connors?

His secretary buzzed a moment later and the inspector came in. You could spot one of them a block away, thought Joe. There was something about the cut of

their clothes, the shine of their shoes, their air of "You can't push John Law around, Bud."

"They still up there?" asked O'Connors.

"Well, where would they go?" growled Joe. "They'll circle Earth in that orbit until the next ice age at the rate you're unwinding the red tape. For the sake of a comma in some regulation you'd let people in distress hang on a sky hook for"—he glanced at the clock—"eighteen hours since they first asked to come in—while you fumble around to determine whether their ancestral stock is pure enough to allow them to set foot on our sacred terra firma. It hasn't been six months since nine of them died because of your precious regulations. If I were on the Intergalactic Advisory Mission, I'd tell everybody to steer so clear of Sol that you'd feel like we were in solitary confinement."

"But, fortunately—for your business—you're not." The inspector glanced out at the field lined with tremendous machine shops, laboratories, and hotels—and the more than a hundred intergalactic ships in various stages of repair and disrepair.

"Fortunately, I'm not. The cross I bear is Emergency Inspection. Do they land or don't they? How long are you going to let those people—?"

"Stop calling them people. They probably have six heads and forty-eight tentacles, and eat their young for breakfast."

"Anybody that has brain enough to transport themselves a hundred thousand light-years across space is people in my book," said Joe. He picked up a thick cigar and chomped heavily on it. "And they're

in trouble. Do they land or don't they?"

"We're proceeding according to I. G. Board agreement," said O'Connors. "Regulations provide—"

"That even if a guy is about dead he can go ahead and die as long as he hasn't got a letter of introduction from I.G."

"Regulations provide," continued the inspector patiently, "that in case of first contact between a visiting race and a given planet, the representatives arriving shall present adequate data for identification which shall then be verified through the I.G. Central Operations unit. That is what we are doing."

"Even if it kills the strangers."

"No exceptions were provided or could be provided for emergency cases. You know that very well. You cannot have forgotten the Trojan incident of Malabar Seven. And so we are proceeding according to regulations and agreement. Any of us would get the same treatment from their planet, wherever that might be."

"You mean you haven't even got them pegged, yet? I told you yesterday they were from Nerane IV and I pointed it out on the charts and showed your central operators the encyclopedic data—"

O'Connors waved disparagingly. "Your sorter isn't official. It has to be verified by our official machines."

"S'funny," said Joe, "that after all these hundreds of years the word 'official' is still synonymous with inefficiency and general chowder-headedness. My sorter gets the data in fifteen minutes—yours hasn't got it in more than eighteen hours."

"Official sources require accuracy. We could not afford to be wrong if the landing of this ship involves violation of the I. G. B. regulations, or if these creatures cannot be identified. Your sorter is not concerned with such factors, understandably. You are concerned only with repairing the vessel and making a profit on the operation."

"And what a wicked thing that is! Eh?" said Joe. "We've been over this before. I know when I'm licked, but when will that obsolete monstrosity get its official bowels in gear and give out with the data? I've had a crew standing by since yesterday."

O'Connors didn't answer. He looked speculatively around the plush, luxurious office that was Joe's one vice and his only indulgence. He looked out at the vast properties that represented as much as a small nation might have once possessed. The

great shops and laboratories rivaled a government facility.

"We'll be taking you over one of these days," said the inspector. "A government can't tolerate a private enterprise of this scope. This should belong to the people."

"Like the Tyrannosaurus," muttered Joe in a cloud of smoke. "He must have kicked and jumped and squealed to the last, too. And you've got just about as much chance now as he had. As long as there is space, you bureaucrats will never be on top again. It took a civil world war to get your kind off the top of the heap once and you're off for good. In an expanding economy civilization simply passes by while you fuss and holler. It's only in a shrinking world that people think they need bureaucrats and socialists to tell them what to do."

O'Connors shook his head sadly. "The government needs men like you. It's tragic that the organizing and technical ability you possess should be coupled with such atavism."

He turned to the door. "I'll send you an official clearance to bring them in as soon as—and if—the sorter verifies the data given by the disabled craft, and central confirms it."

He left.

Every time, Joe thought. Every time it was like this. Sometimes sooner, sometimes longer. He went to the window and looked out upon the hundred or so craft from every part of the universe that lay on the landing field. That they represented genius incredibly far removed from his comprehension troubled O'Connors not at all. One of them, a huge vessel a mile and a half long and fifteen hundred feet in diameter had come almost three million light-years out of space, the farthest communication that men of Earth had yet had with other sentient beings.

But O'Connors was not impressed. He'd kept them in an orbit above Earth's barrier screen for three days while he checked their credentials.

If there had turned up the slightest inconsistency in the communication between their alien minds and his primitive Earth mentality, he'd have refused entry to their crippled and nearly helpless vessel. He would probably have let them die in space rather than let them down, Joe thought bitterly. The bureaucratic mind!

He stepped back to the desk and called

his repair superintendent. "Winfield, have you heard anything new from the Nerane IV?"

"Not for the last four hours. They might be dead by now if they're in any serious personnel trouble aboard."

"Yeah, they might be, mightn't they? Just like six months ago when he held the Cordomarians off until nine of them died. Nine specimens of the most brilliant intellect we've ever known—sacrificed to a regulation. We're bringing them down. It's not going to happen again."

"But O'Connors—!"

"They have an ellipsoidal hull. He couldn't tell them from a Croesan Nightwing or a Hammerlane."

"As soon as we key the screen to drop it through, some bright lad in central will pick up the data. They're watching us too closely."

"We'll take that chance. People's lives are more important than O'Connors' regulations. Better send out a boarding party if you haven't heard for that long. See if anyone can get into them. Let me know what their trouble is."

"O.K. I'll send out Perkins and his crew."

Joe moved away and stood by the window again. This out there was his, he thought savagely, and no bureaucrat was going to regulate him into murdering his customers. He'd built up this business from the modest scratch his father had started, and it was his to use. He only wished he had someone to pass it on to. There was Richard, of course, but Richard had disappeared fifteen hundred light-years away twelve years ago. It would be a vain hope to suppose that Richard would ever inherit "Joe's Service and Repair."

In the early days of intergalactic flight, when the super-tee ships were first brought out, a vessel was little more than a flying machine shop and laboratory. It had to be equipped with facilities for virtually rebuilding itself in case of failure or disaster.

That robbed the ships, especially the early small ones, of much of their useful load. Finally, when men made contact with other intelligent life they found it was almost the same among every other group.

For some reason, ninety percent of other inhabited worlds were almost diametrically across the galaxy. When the first meager

flights probed earthward, in response to man's explorations, old Joe Williams had been just a boy. He'd walked through the alien hulls in ecstatic rapture. He was only fifteen when he saw the first crippled ship whose occupants had managed to land it on alien earth at the end of its last flight.

They were technicians and navigators, but not engineers. They could not duplicate or repair the worn and shattered power plant of their ship. For five years they lived as prisoners aboard their ship until they were able to get transportation back.

That incident gave him the clue to what he wanted to do with the rest of his life. This was only the start of a new frontier of technology. There would be increasing hoards of visitors from other worlds, now that they were aware that an inhabited planet in this region had been located. There would be a place for Earthmen who could repair those alien vessels when the need came.

There were others who had the same idea. But Old Joe had got the jump on them. He saw that mere skill in terrestrial technology would not be enough. After he graduated from the best schools on Earth, he spent five years hopping from one planetary system to another studying where he could, picking up clues and scraps of information about other world technologies, how their spaceships were powered and run, the biology of their occupants, the needs that he might be able to supply on Earth.

It wasn't easy. The worlds across the galaxy were just beginning to set up the First Galactic Council. There were suspicions and doubts, and uneasy meetings. But he obtained enough.

Returning to Earth, he bought twenty-five square miles of American desert and set up business in a veritable shack. For three years he had no customers.

Then he dickered with the government for that impounded vessel which had been abandoned when he was a boy. It was decided that, since the original owners had not come for it by now, that a precedent might well be established by selling it to Joe for a big chunk of his few remaining bucks.

And he rebuilt it. It was a pip, in view of his knowledge and experience he'd gained from his travels. He'd run across an almost identical drive among the Indians. But he was too broke to do more than take it on a single test run to Mars and back.

That was enough. Somehow the news got



around the galaxy faster than the ship itself could have done.

Joe was made.

That was the beginning. The infant FGA sponsored a program of approved service and repair stations at strategic points throughout the galaxy and Joe was automatically for it because by then he knew more than any other Earthman about foreign ships and drives.

It had been a reputation for Young Joe to maintain—and he'd maintained it. If only there were someone to turn it over to—

As usual, the politicians came pounding hard on the heels of the scientists, bent on regulating their betters. Some worlds were more prone to this tendency than others, but Earth was right up front in this respect. There had been a few unfortunate incidents in the meeting of alien cultures—but far fewer than even the most hopeful had supposed. An almost universal fact was that by the time a race had reached the stars it had begun to mature.

Joe turned back to the desk on which lay the data on the strangers from Nerane IV. Their planet was one of the most non-terrestrial so far encountered. Little commerce passed between its people and the rest of the galaxy, yet their ships occasionally called on exploratory or cultural missions, though none had been to Earth before.

The creatures had a hard exoskeleton. Stiff, bony appendages supported them on a planet eight times the mass of Earth. They lived in a yellow-brown fog of nitrogen peroxide at a pressure of about one sixth Earth atmosphere.

In an almost symbiotic relationship they lived with another species, a small, remotely monkeylike creature called *mensa*. These were controlled by telepathic forces and performed the physical work which the clumsy exoskeletons of the more intelligent creatures did not permit.

Joe read through the data from the massive library his company had accumulated on a hundred thousand planets and cultures. He did not have the slightest conception of what kind of metabolism an atmosphere of nitrogen peroxide could support—or even if it were necessary to the creatures' metabolism. But, at any rate, it was reported that their ships were provided with such an atmosphere.

Winfield called as he finished the file.

"Perkins is in contact with them," he said.

"They were just about to give up and go away. He didn't think it necessary to go aboard since they seemed to be doing all right for the time being. One of them is very sick, they said. That's one reason why they're in such a steam to get the ship repaired."

"All right. We still have no official clearance on them. Get them down. Use one of the pressure hangars, just in case. We wouldn't want to smash them with our atmospheric pressure in case of accident. And I'd hate to have theirs get loose on the field."

"Think we ought to have quarters for the crew?"

"Do you know how many there are?"

"Just two, they say."

"Two? On a ship that size?" Joe recalled the photographs and plans of Neranian ships. "I'd say there ought to be a hundred of them at least. Something funny if only two are aboard. Anyway, we'd better get quarters ready. It might be necessary to evacuate the ship to work on it."

It was about a half hour later that the dark oval of the ship appeared over the field. The service ship in which Perkins and his crew rode followed at a little distance, talking the strangers down.

It wasn't without reason that Old Joe had picked a desert site for his operations. Some of the visitors were sloppy pilots near a planet, and at other times ships came in almost completely out of control, crashing all over the landscape in a futile attempt to set down normally.

But the Nerane ship was adequately controlled. Joe wouldn't have called it a first-class landing, but it was good enough. He saw Perkins land a short distance away. Within minutes the ship was being towed toward the large, pressurized hangar where no damage would be done if the obnoxious atmosphere within the ship were to get free.

Joe turned away. He would have liked to have gone out and handled the job himself, but there were too many other matters at hand. Too many executive matters. Joe gagged on that word. It made him think of plump, jolly men at luncheon clubs.

It was six-thirty and the evening crews had come on, when he folded up his papers and decided to call it a day. Many of the customers insisted on continuous attention to their needs, so Joe had long ago gone on a round-the-clock basis. He wondered how they were coming on the Nerane ship.

Even as he thought about it, his phone buzzed and Litchfield, Chief Repair Engineer, spoke:

"Joe? This Nerane IV ship is a screwball setup. We can't find anything wrong with the thing. It's a heavy-water outfit with a type eight drive and a few modifications. As far as we can see it's in perfect working order. The Neranians say it goes all right up to about half cee, but the super-gee won't throw in. We've checked it with the Manson field, and it works perfectly as far as we can see. I don't think these soap-brains know how to run the ship."

"Were there only two of them aboard as Perkins said?"

"That's right."

"How about their *mensa*? That's the little monkeys that they use to do the heavy work. Telepathic symbiosis."

"Didn't see anything of them. Just these two crabshells."

"Well—it's none of our business if things aren't according to Hoyle with the customers. You're sure they're Neranians?"

"I'm not sure of anything. They look like the pictures in our library books."

"I was thinking maybe they had bought the ship from the Neranians and perhaps had not been instructed properly."

"But look—how could they get clear out here, if the super-gee had *never* been working. That's about ninety thousand light-years, isn't it?"

"Something like that. Maybe something's conked out that the Manson field doesn't show. There could be a first time. Take the ship up on a run and see what the trouble is. That's about the only way."

"Yeah, but I'd like to get away from that, unless we could dump the gas. If we don't, it means wearing the barrel bottoms, and it's no fun riding in those in a ship that's bucking its super-gee."

"Think of something else then—Oh, let's take it up. I'll go with you. Get things ready. I'll be down in a minute. While you're waiting, try a cerebral analogue on them."

"We tried to. They refused to have anything to do with it. Wouldn't let their brains be tinkered with. A coverup, I suspect, to keep us from finding out how small a quantity of the stuff they've got."

"Maybe I can talk them into it. Hang on."

It wouldn't have been so bad if the business involved merely straight mechanical repair. They could have repaired hulls, replaced reactor piles, counteracted wild radioactivity, rebuilt drives, or anything else

in the mechanical or nuclear line, but in nearly every job they had to deal with—usually contend with—the personality and alien thinking of the crew. It was tough enough trying to figure out how to repair a drive manufactured two million light-years away on a planet that no Earthman had yet seen by creatures whose thoughts were only remotely like those of men—but when members of the species, who were ignorant of the principles of their own machines, tried to tell Joe's men how to fix things, then it got complicated.

That's why the biological and psychological departments of his company were nearly as big as the mechanical.

He went to the lock in front of the closed hangar and donned one of the coated steel, articulated joint suits which would enable him to enter the atmosphere of the ship. These were the uncomfortable outfits known as "barrel bottoms" in which it was sometimes necessary to work inside the foreign vessels. They would stand anything from a vacuum to a hundred atmospheres pressure, and were completely noncorrosive in any liquid or gas that anyone had thought about to date.

There was no opening for vision. The helmets were faceless steel blanks. Sight was by viewscreen entirely—a small plate set in front of the wearer's face.

Joe stepped inside the hangar before he remembered to turn his plate on, and stumbled around in blindness.

"Where are you going—?" He heard Litchfield's voice.

"Haven't worn one of these for so long—" he mumbled while his fingers sought the controls. "There—"

The interior of the hangar showed on his plate. Floodlights poured illumination over the polished hull. Beautiful, seamless construction, Joe noted.

"Where's your cerebropath? Inside?"

"No. We found some terminals in the ships lock so we ran some leads and put our end outside. It's over here."

In spite of the paramagnetic assistance, Joe waddled awkwardly in the heavy suit. On the other side of the ship he came to a panel of apparatus with a cable of leads running into the open lock door of the ship. On a screen, he saw the interior. The two Neranians were looking at him through a thick yellowish brown haze that was the atmosphere in which they lived.

He had long been accustomed to appear-

ances of foreign creatures, which were repulsive by Earth standards, but these two specimens were among the most unbeautiful he had ever seen.

He stepped up to the instrument and spoke to them, the machine automatically making a semantic transfer of his language meanings into theirs. "I am Joe Williams," he said. "You have heard of me, of course, since you have come here for repairs."

"Your name is well known throughout this and many other galaxies," said one of them. He couldn't tell which. The voice that spoke was not theirs, of course, but only the electromechanical reproducer of the instrument.

"We felt sure that you could repair our ship," continued the Neranian. "We have far to go, and one of us is sick. We cannot make use of our super-cee drive. We have been disappointed by the report of your technicians that they can find nothing wrong with the mechanism."

"Our tests show the super-cee to be operating," said Joe. "We thought perhaps it would be best to take the ship out for a trial run. You might be able to demonstrate the trouble better that way, however, we could possibly save time if you would allow a cerebral analogue check."

"This means mind reading—?"

"Well . . . not exactly—"

"I fear we cannot submit. We do not understand your meaning. The test is unfamiliar to us. You will, naturally excuse our suspicions."

"Of course. But the test is based on a simple premise. In every race it has been found that the artifacts of the culture have analogous structures in the brain cells of the species. Very frequently, when we find a complex piece of equipment which we cannot analyze, we can discover its means of operation by means of analogues derived from the fundamental structure of the brain of the creating species."

The two Neranians were silent, as if conferring with each other for a moment. Then the voice came again. "We cannot permit it. We would prefer that you make a check flight."

Joe shrugged inside his suit. "As you wish."

The cerebropath was moved inside the ship. Joe and Litchfield went aboard with two young technicians named Barnes and Hamilton.

In the murky atmosphere of the ship. Joe was sure his suit was leaking. He would

have sworn he could smell the foul stuff the Neranians lived in.

Must be getting old, he thought. He remembered when he was a kid and his father had taken him through the first ships from out of the distant galaxies. He remembered the kind, ugly faces of those first visitors he'd met. But it was just as well that that kind of thrill didn't last forever, he supposed. Nobody could live for all his life on the high emotional plane he enjoyed when he was a kid.

The ship glided out of the open doors of the hangar under the guidance of the ground crew. It was towed far out beyond the shops to the desert testing-stand field.

Joe watched the Neranians' handling of the ship with a critical eye. "I thought you people always used your *mensa*," he said abruptly.

The two at the control panel seemed to stiffen, he thought afterwards. They hesitated, then one spoke. "We are trying to get away from them. It is cumbersome to depend on them. We have been trying a surgical technique to enable us to do without them."

Joe grunted. It didn't look as if they had been very successful. They were clumsy in their manipulation of the controls.

"Head out at right angles to the plane of the ecliptic," he ordered. To his companions, he said, "You three go down and watch the engines. When the sub-ceeds get up to limit, I'll come back there and try to throw in the manuals on the super-cee."

The three men ducked awkwardly through the low corridors. The ship was designed with paragravity controls for horizontal walking instead of vertical climbing.

Fortunately, the Neranians were no more than a foot shorter than the Earthmen. Occasionally, there were ships in which it was impossible for a man to get about through the small openings that fitted the builders.

As the ship sped swiftly upward, Joe watched the indicators. As far as he could see, everything was functioning well.

"All right," he said to the Neranians. "I'll go back and try the super-cee from the engine room. If it works all right, you cut it out after a couple of minutes, and we'll work on it from up here. You have to cut it off, remember. Once it's on, we can't get into it from down there because of the field buildup."

The creatures gave the Neranian equivalent of a nod. Joe ducked and clumped his

way through the low, narrow passages to the far rear of the ship.

"There is nothing wrong with this ship," said Litchfield. "We've gone over every item of the super-cee."

"Well, we'll soon know. Get behind the shield." Joe stepped up to the intricate panel. The manipulations were extremely involved and required great exactness to keep the ship from vanishing in very small particles of stardust when the faster-than-light drive came on. Finally, it was done, and he squeezed a pair of handles, the Neranian equivalent of a relay push button. Instantly, a copper haze surrounded the mass of equipment beyond the panels, and the meter needles swung over.

"See?" said Litchfield. "Nothing wrong with it."

Joe watched the panels in silence. The engineer was right. There was no question about it. But why had the Neranians come to him with a perfectly good ship and asked for repairs?

"Let's go back and have a talk with our friends," he said. "There's just the bare possibility that there's trouble in the relays and these birds didn't have sense enough to try the engine room manuals before yelling for help."

The four of them left the engine room, swinging the automatic bulkhead door behind them. The next chamber through which they passed was a mechanical storage room.

Joe pushed on and shoved against the next bulkhead door. He shoved again, then leaned on it hard and swore. "What goes on?"

Suddenly, Litchfield went to the barrier behind them and pushed. It was locked. The engineer matched Joe's swearing and looked at his boss.

"Locked—the mechanicals controlled from up front. Does it make sense?"

Joe expelled air slowly through his teeth. "It begins to," he said. "It begins to."

"I don't get it," said young Barnes, the technician. Fear edged his voice.

"This ship is hot," said Joe. "That's our answer."

"Hot?" said Hamilton. "You mean radio-active? We checked—"

"No. It's a vulgar term common in my Dad's day. There was some of it then, but almost none now. It means that those two clamshells up front just took off with the ship without asking anybody's permission. In plain language, they stole it"

"I don't follow you," said Litchfield.

"They aren't Neranians at all. They must be very closely related, but they're not the same species. We should have known that by the absence of the *mensa*. That story about surgical modification is a lot of guff."

"This ship is designed for operation by *mensa*. There are handles and buttons and wheels, but nothing to fit the claws of that pair up front."

"Well, it still doesn't make sense. Why did they come to us? Why all the talk about failure of the super-cee? Most of all, where do we go from here?"

"I suspect they're probably a pair of pretty desperate criminals. Thugs are thugs in any language—and generally not very bright. Setting the automatic controls of the super-cee requires fine digital manipulation. They simply couldn't do it. They've come on sub-cee from wherever they swiped the ship. They didn't even know about the engine manuals, I suppose, or else they couldn't even set them. They hoped to get us to start the thing on automatics, and then planned to get rid of us somehow. It might have been a little tough unless they have weapons that would go through these suits easily. But we made it perfectly simple for them, bless our little hearts. We offered to walk right into their trap."

"As to where we go from here—I don't think they're worrying much about it. But we'd better. Probably the only atoms of free oxygen aboard are in these tanks of ours. Mine says"—he scanned the indicators beside the viewplate in front of his face—"about six hours to go."

"I've got eight," said Litchfield. "Maybe we could even it up some way."

"Mine's seven," said Hamilton, "and we can't even it up. There's no provision for decoupling the tanks in an atmosphere like this. Which is a neat piece of design."

"I've got four here," said Barnes. His voice was on the verge of cracking, it seemed to Joe. "I'll be seeing you, boys."

"Cut it out," said Joe uneasily. "We'll get out of here and have clam chowder for desert. Though I must admit the 'how' of doing so eludes me at the moment. Four hours—and they've souped this up to about eight-cee. I'd judge—we'll be a long way from home."

They moved slowly about the room. There were two other chambers open to them, one on either side, but there was no exit. They decided that one contained the

machinery for producing and circulating the foul nitrogen peroxide atmosphere. The other was a storage chamber for the heavy water used in the reactor.

There was a small store of tools, but none that would dent or burn the doors. Barnes and Hamilton had brought along their kits, but they held nothing that would help.

They sat down on rows of cannisters. Joe looked about at the blank-faced, monstros-looking suits that housed his companions. They were silent, thinking that this was a stupid way of winding up. There was Barnes with only four hours of oxygen to go. They couldn't share theirs with him.

"Why couldn't we wreck the atmosphere plant?" asked Barnes suddenly. "Maybe we could even find a way to discharge it into space. That would fix those clamshells' little red wagon good."

"Yes, but what good would it do us?" said Joe. "We'd still be locked in here and no way out."

"We'd be taking them with us, anyway—" Barnes muttered savagely.

"Cut it out," said Joe. "This is entirely impersonal. Get your gray matter agitating on the physical problem of getting out. You can hate them afterwards. Now, as I see it, the problem is to persuade them to open up the door voluntarily. We can't possibly get out unless they do."

"You put it so neatly," said Hamilton. "What are we going to do? Offer a free ride to the one that opens up first?"

They were young, Joe thought, and they'd never been trained for danger. Life was too soft for kids nowadays. It was probably the first time these two youngsters had ever considered the possibility of fatal circumstances occurring to them.

They wouldn't be of much help.

He turned to Litchfield. "What do you think?"

"I'm thinking, but there's not much production so far. I don't see what we can do to make them turn us loose."

"Irritate 'em."

"Like itching powder under their shells, huh?"

"Maybe there's something here that we could pour into the atmosphere system. Let's have a look anyway. Tear open some of these cans."

He glanced at the clock face in the helmet. A full half hour had passed since the

doors had first been clamped. Three and a half hours to go—for Barnes.

Litchfield held up an open can. He had a steel claw full of mushy substance. "Must be food. Do you know what they eat?"

"No. Keep going and keep thinking."

The two technicians were half-heartedly obeying Joe's instructions, but they had no enthusiasm for the task. They'd given up completely, he thought. He and Litchfield would have to carry them.

He kept on, opening boxes and storage cabinets, trying to identify the substances encountered, his mind constantly examining and rejecting each item for possible means of attracting the captors to the locked chamber.

He wandered on into the chamber where the huge tanks of heavy water were stored.

"We haven't found a supply of drinking water, have we?" said Joe.

"All food as far as I can tell here," said Litchfield.

"On a planet with an atmosphere of nitrogen peroxide I wonder if there wouldn't be an absence of open bodies of water. Perhaps the metabolism of any life there would have to exist without water."

"I don't know," said Litchfield. "Why? Well—I suppose not. Constant reaction would produce nitric acid rain. In time there would be no more water because the process would go to termination. On a planet like that they'd probably handle water the way we do nitroglycerine. So—" Litchfield suddenly shouted. "Joe! That's it! We'll irritate these crabs until they'll swear they're being broiled alive."

"I don't get it," said Hamilton. "What are you going to do?"

"Pipe some of this water over to the atmosphere pumps. Those crabs will be breathing nitric acid vapor—providing they breathe. If they don't, I'll bet it will sting their hides and send them back here yammering to get in."

"Yeah . . . yeah . . . it might do it," breathed Barnes. His voice was almost pitiful at this apparent reprieve.

"Well, let's not bank on it until it's done," Joe growled. "This won't be easy with what we've got to work with."

"Turn about will have to be within an hour—" Barnes murmured.

They found a coil of tubing among the supplies. It was soft enough to bend, but it couldn't be melted or soldered with the small torch that their kits contained. They

had to improvise a coupling to the tank outlet. The tubing was too soft to permit tight clamp. Its size would only permit a butt joint.

The makeshift flange coupling that they finally devised cost them a full half hour. And they still had to provide an inlet to the gas system.

While Barnes and Hamilton cut into the tough metal of the ducts just ahead of the blowers, Joe and Litchfield made some nozzles and fitted them crudely to the end of the line. The height of the tank provided some standpipe pressure, and the blower made a partial vacuum in the duct so they believed the water would be broken up sufficiently.

They inserted the nozzles and turned the water on. It sprayed out with satisfying sharpness. They packed the hole tightly to improve the spray. Then they sat back to wait.

"How long do you think it will take?" asked Barnes hopefully.

"No telling," said Joe. "It will take a while to build up sufficient concentration of acid for them to notice. We're a long way from the control room—"

Nobody said anything. An hour and a half left. Past turn-about time for Barnes. They were going to have to watch him die, Joe thought. But they wouldn't see him. Hidden behind the blank steel face of the helmet, his face wouldn't be seen by anyone. It would be like dying all alone.

"You lie down," he said abruptly. "Breathe as slowly as possible. Close your eyes and stop stewing. The rest of us will get busy and rig up some kind of an electrolysis setup so that the moment we get out of here, we'll blow out one of these water tanks and rig up the other one to collect some oxygen. We can get in there and equalize our suit supplies and replenish them. Maybe a couple of us can hole up in the tank and let the others run the ship back home by using the supply of the four suits. Take it easy, Barnes. We're all going to get out of this."

He didn't believe that any more, he thought, but it helped to say it. The water line had cost them too much time. Turn-about was too far gone, even with such added velocity as they might obtain during return. Litchfield could go another hour and a half. He might make it alone.

The work kept their minds from degenerating into circularity of thought. They had to exercise their brains to rip

out the right power lines while they were hot, and feed them to the terminals they had rigged up. With a collector for the oxygen and hydrogen, they were all ready to be inserted in a tank as soon as the gas could be blown free by opening the chambers to space.

And then they had done all that they could do. There was nothing at all to do but wait. They lay on the floor to conserve their oxygen. Joe kept thinking maybe there was something they had overlooked—something utterly simple that would enable them to move right out of the chamber.

Barnes had been quiet for a long time. Joe wanted to talk to the boy, but he couldn't think of anything to say. It was no good telling him he wasn't going to die—because it was a thousand to one chance he was.

When there was only fifteen minutes supply left to Barnes, Joe said, "Barnes—?"

Only after a long pause did the technician answer, and then his voice was weak and sleepy sounding. "Yes—?"

"I'm sorry, kid. I thought I was smart breaking the regulations and letting these crabs down. A regulation would have sent them away, and none of us would be here now."

"It's O.K.," said Barnes, and his voice sounded more secure than it had at any time since they had been trapped. "It's not bad this way. I feel just kind of sleepy. I guess they call it anoxia, don't they? Hope you guys make it. Be sure to see Mary. Tell her I wasn't even scared a bit."

And then they heard the scratching at the door. Unbelieving, they listened, and heard it again. The three of them scrambled to their feet as swiftly as possible in the clumsy armor. They hid behind the door, and waited for it to open a crack.

Joe got his steel fingers into it and jerked. The creature on the other side stumbled and fell into the room, threshing weakly on the floor. His skin, visible between the joints of the exoskeleton was livid with acid burn, and his eyes were nearly shut.

"Take care of Barnes," Joe ordered the other two. "I'll go up front and turn us around."

"The other one might be armed—" Litchfield warned.

"It won't matter if he's in as bad con-

dition as this one. Block this door and come up in three minutes if we don't turn."

Joe had little fear of opposition after seeing what the acid had done to the one creature, but he kept a sharp watch as he came into the control chamber.

He needn't have. The creature was slumped in the cradle that supported him before the panel of controls. He saw Joe but made no move. The cerebropath was still operating, and he spoke.

"We . . . didn't know what had happened to you. We thought you were . . . taking care of engines. Didn't know you were locked in—"

A liar to the last. Joe smothered a temptation to crash his steel fist into that face. He unfastened the straps and dumped the creature to the floor. Swiftly, he cut out the super-cee drive. The controls worked perfectly, as he had known they would. The creatures had been lying from the first.

He turned the ship around with the reaction motors, checked his position. He thought the ship had moved in a straight line since take-off. He reversed the heading a hundred and eighty degrees. That would put them close. Later, he could correct for small errors. He threw in the super-cee again and locked it.

He started back to the rear of the ship. The creature on the floor stirred, but Joe knew there was no fight left in it. The acid vapor still poured through the ship, and there was no way to get it out now. They'd have to take it until they got back to Earth.

He returned to the rear of the ship. The two armored figures were still bending over the form of Barnes.

"He died," said Litchfield. "We got the oxygen generator going, but it is too slow building up pressure. He was almost gone the last time he spoke to us."

Red tape, Joe thought. Red tape would have saved young Barnes. If they had been careful enough to check the incoming ships and passengers adequately, Barnes would be alive and home with Mary.

O'Connors was right, he thought dully. You had to be accurate. You couldn't afford a slip. This was what happened when you slipped.

And to be absolutely sure, you had to be a dealer in red tape.

Joe turned away from the dead technician. From now on his place would be known

throughout the systems as the house of red tape. He'd make O'Connors' office look like the sloppiest port of entry anywhere. Joe Williams would be the king of red tape.

It was well past sun-up when they brought the ship back over the field. Navigational corrections on the Nerane instruments had taken longer than they had thought.

Barnes' wife was waiting by the administration building in the new yellow car that Barnes had been quite proud of. Waiting to take him home, and Joe would have to tell her that her husband was never coming home again.

O'Connors was there, too. The three men climbed down from the ship, their suits still on. O'Connors advanced towards them.

"Mr. Williams—?" He laughed faintly at the blank steel faces. "I presume one of you gentlemen is Mr. Williams."

No one said anything. Joe hated him because he had been so right about the regulations.

"There'll be serious consequences from you admitting this ship without clearance," said O'Connors. "Our report from Nerane IV shows that this ship has been stolen. We will have to commandeer such of your facilities as are necessary to impound the ship and the crew. As for your breaking regulations, there may be some amelioration in the fact that you made possible the capture of the ship and the thieves—"

"They're dead," said Joe tonelessly. "One of our boys is dead, too."

O'Connors seemed taken aback. "That's very serious. It greatly complicates matters. Regulations provide for an investigation by the Mission in the case of death of one species aboard the commercial vessel of another."

"I said one of our boys was dead," repeated Joe. "Don't regulations provide for any sympathy or consolation? Don't they allow you any expression of human feeling whatever?"

"Of course," said O'Connors hastily. "The department will express official condolences to—the next of kin. I'll have to check with central, however, to determine if I'm authorized to speak in the name of the department or if it must come from higher up. You know how rigid organization is."

"Yes—I know," said Joe.

He had been wrong, he thought with fierce satisfaction. Red tape *wasn't* the way. Red tape wasn't synonymous with the pre-

cautionary, careful thinking that Joe should have done.

Joe leaned over and picked up a two-inch bar of steel that had been carelessly dropped on the field. In the steel hands of the armor suit he slowly twisted it until it sheared in two. He dropped the pieces on the ground. He advanced on O'Connors. The inspector looked from side to side at Joe's companions uneasily. "What are you *doing*—?"

Joe reached out swiftly and clamped him between the two steel arms. The inspector squealed and wriggled loose. Joe let him drop to the dusty ground.

For a moment, O'Connors looked from one to the other of the faceless men. "You'll pay for this! I'll sue—"

They advanced again. The disheveled man turned and ran in panic across the field.

Yes, he'd pay, Joe thought tiredly. But it was worth it to see that red tape artist scrambling in the dust. He shuddered when he thought back to that moment when he'd almost believed that O'Connors' way was right.

That young Barnes had died because of carelessness in dealing with the strangers

was bitter knowledge. But regulations piled on regulations were not the cure for carelessness.

The red tape promoters added law to law and pretended it was wisdom. They demanded obedience to regulation merely for the sake of regulation, and they had long ceased to think outside the scope of their sacred rules.

But they betrayed themselves when their laws did not cover the situation at hand. There had been the Trojan incident of Malabar Seven. There had been the death of the nine Cordomarians. And there was the death of Barnes.

There was no simple answer. All the laws in creation could not cover all the cases of emergency aboard interstellar ships. Each had to be made a separate case, and sometimes you could make mistakes that way. But not as many as by the blind application of blanket regulations. The fight that Joe had carried on for so long to have the regulations modified would have to go on.

He turned back to the building and changed from the steel armor suit. Then he went across to the girl who was still waiting in the yellow car.

**AS HEALER.** One Lady writes: "My sister suffered very badly for years, but since I gave her a Joan the Wad to keep near her she is much easier. Do you think this is due to Joan or the Water from the Lucky Well?"

**AS LUCK BRINGER.** Another writes: "Since the War my wife and I have been dogged by persistent ill-luck, and we seemed to be sinking lower and lower. One day someone sent us a Joan the Wad. We have never found out who it was, but, coincidence if you like, within a week I got a much better job and my wife had some money left her. Since then we have never looked back and, needless to say, swear by 'Queen Joan'."

**AS MATCHMAKER.** A young girl wrote and informed me that she had had scores of boy friends, but it was not until she had visited Cornwall and taken Joan back with her that she met the boy of her dreams, and as they got better acquainted she discovered he also has "Joan the Wad."

**AS PRIZEWINNER.** A young man wrote us only last week: "For two years I entered competitions without luck, but since getting Joan the Wad I have frequently been successful although I have not won a big prize. But I know that . . . who won £2,000 in a competition, has one because I gave it him. When he won his £2,000 he gave me £100 for myself, so you see

## JOAN THE WAD

Queen of the Lucky Cornish Piskeys  
Thousands of persons all over the world  
claim that she has brought them Wonderful  
Luck in the way of Health Wealth and  
Happiness

### HISTORY FREE FOR A STAMP

you will send me your name and address,  
a 1/- stamp and a stamped addressed  
envelope for reply, I will send you a history  
of the Cornish Piskey folk and the  
marvellous miracles they accomplish.

All you have to do is to send a 1s. stamp  
196, JOAN'S COTTAGE,



**DO YOU  
BELIEVE IN  
LUCK?**

**AS SPECULATOR.**  
A man writes: "I had some shares  
that for several years I couldn't give  
away. They were 1/- shares, and all  
of a sudden they went up in the  
market to 7/9. I happened to be  
staring at Joan the Wad. Pure  
imagination, you may say, but I  
thought I saw her wink approvingly.  
I sold out, reinvested the money at  
greater profit and have prospered  
ever since."

and a stamped addressed envelope for the history to  
LANIVET, BODMIN



# THE MERCENARIES

By H. BEAM PIPER

*Once, wars were won by maneuvering hired fighting men; now wars are different—and the hired experts are different. But the human problems remain!*

DUNCAN MACLEOD hung up the suit he had taken off, and sealed his shirt, socks and underwear in a laundry envelope bearing his name and identity-number, tossing this into one of the wire baskets provided for the purpose. Then, naked except for the plastic identity disk around his neck, he went over to the desk, turned in his locker key, and passed into the big room beyond.

Four or five young men, probably soldiers on their way to town, were coming through from the other side. Like MacLeod, they wore only the plastic disks they had received in exchange for the metal ones they wore inside the reservation, and they were being searched by attendants who combed through their hair, probed into ears and nostrils, peered into mouths with tiny searchlights, and employed a variety of magnetic and electronic detectors.

To this search MacLeod submitted wearily. He had become quite a connoisseur of security measures in fifteen years, research and development work for a dozen different nations, but the Tonto Basin Research Establishment of the Philadelphia Project exceeded anything he had seen before. There were gray-haired veterans of the old Manhattan Project here, men who had worked with Fermi at Chicago, or with Oppenheimer at Los Alamos, twenty years before, and they swore in amused exasperation when they thought of how the relatively mild regulations of those days had irked them. And yet, the very existence of the Manhattan Project had been kept a secret from all but those engaged in it, and its purpose from most of them. Today, in 1965, there might have been a few wandering tribesmen in Somaliland or the Kirghiz Steppes who had never heard of the Western Union's Philadelphia Project, or of the Fourth Komintern's Red Triumph Five-Year Plan, or of the Islamic Kaliphate's Al-Borak Undertaking, or of the Ibero-Ameri-

can Confederation's Cavor Project, but every literate person in the world knew that the four great power-blocs were racing desperately to launch the first spaceship to reach the moon and build the Lunar fortress that would insure world supremacy.

He turned in the nonmagnetic identity disk at the desk on the other side of the search room, receiving the metal one he wore inside the reservation, and with it the key to his inside locker. He put on the clothes he had left behind when he had passed out, and filled his pockets with the miscellany of small articles he had not been allowed to carry off the reservation. He knotted the garish necktie affected by the civilian workers and in particular by members of the MacLeod Research Team to advertise their nonmilitary status, lit his pipe, and walked out into the open gallery beyond.

Karen Hilquist was waiting for him there, reclining in one of the metal chairs. She looked cool in the belted white overalls, with the white turban bound around her yellow hair, and very beautiful, and when he saw her, his heart gave a little bump, like a geiger responding to an ionizing particle. It always did that, although they had been together for twelve years, and married for ten. Then she saw him and smiled, and he came over, fanning himself with his sun helmet, and dropped into a chair beside her.

"Did you call our center for a jeep?" he asked. When she nodded, he continued: "I thought you would, so I didn't bother."

For a while, they sat silent, looking with bored distaste at the swarm of steel-helmeted Army riflemen and tommy-gunners guarding the transfer platforms and the vehicles gate. A string of trucks had been passed under heavy guard into the clearance compound; they were now unloading supplies onto a platform, at the other side of which other trucks were

backed waiting to receive the shipment. A hundred feet of bare concrete and fifty armed soldiers separated these from the men and trucks from the outside, preventing contact.

"And still they can't stop leaks," Karen said softly. "And we get blamed for it."

MacLeod nodded and started to say something, when his attention was drawn by a commotion on the driveway. A big Tucker limousine with an O.D. paint job and the single-starred flag of a brigadier general was approaching, hornning impatiently. In the back seat MacLeod could see a heavy-shouldered figure with the face of a bad-tempered great Dane—General Daniel Nayland, the military commander of Tonto Basin. The inside guards jumped to attention and saluted; the barrier shot up as though rocket-propelled, and the car slid through; the barrier slammed down behind it. On the other side, the guards were hurling themselves into a frenzy of saluting. Karen made a face after the receding car and muttered something in Hindustani. She probably didn't know the literal meaning of what she had called General Nayland, but she understood that it was a term of extreme opprobrium.

Her husband contributed: "His idea of Heaven would be a huge research establishment, where he'd be a five-star general, and Galileo, Newton, Priestly, Dalton, Maxwell, Planck and Einstein would be tech sergeants."

"And Marie Curie and Lise Meitner would be Wac corporals," Karen added. "He really hates all of us, doesn't he?"

"He hates our Team," MacLeod replied. "In the first place, we're a lot of civilians, who aren't subject to his regulations and don't have to salute him. We're working under contract with the Western Union, not with the United States Government, and as the United States participates in the Western Union on a treaty basis, our contract has the force of a treaty obligation. It gives us what amounts to extra-territoriality, like Europeans in China during the Nineteenth Century. So we have our own transport, for which we must furnish petrol, and our own armed guard, and we fly our own flag over the Team Center, and that gripes him as much as anything else. That and the fact that we're foreigners. So wouldn't he love to make this espionage rap stick on us!"

"And our contract specifically gives the United States the right to take action

against us in case we endanger the national security," Karen added. She stuffed her cigarette into a not-too-recently-emptied receiver beside her chair, her blue eyes troubled. "You know, some of us could get shot over this, if we're not careful. Dunc, does it really have to be one of our own people who—?"

"I don't see how it could be anybody else," MacLeod said. "I don't like the idea any more than you do? But there it is."

"Well, what are we going to do? Is there nobody whom we can trust?"

"Among the technicians and guards, yes. I could think of a score who are absolutely loyal. But among the Team itself—the top researchers—there's nobody I'd take a chance on but Kato Sugihara."

"Can you even be sure of him? I'd hate to think of him as a traitor, but—"

"I have a couple of reasons for eliminating Kato," MacLeod said. "In the first place, outside nucleonic and binding-force physics, there are only three things he's interested in. Jitterbugging, hand-painted neckties, and Southern-style cooking. If he went over to the Komintern, he wouldn't be able to get any of those. Then, he only spends about half his share of the Team's profits, and turns the rest back into the Team Fund. He has a credit of about a hundred thousand dollars, which he'd lose by leaving us. And then, there's another thing. Kato's father was killed on Guadalcanal, in 1942, when he was only five. After that he was brought up in the teachings of Bushido by his grandfather, an old-time samurai. Bushido is open to some criticism, but nobody can show where double-crossing your own gang is good Bushido. And today, Japan is allied with the Western Union, and in any case, he wouldn't help the Komintern. The Japs'll forgive Russia for that Mussolini backstab in 1945 after the Irish start building monuments to Cromwell."

A light-blue jeep, lettered *MacLeod Research Team* in cherry-red, was approaching across the wide concrete apron. MacLeod grinned.

"Here it comes. Fasten your safety belt when you get in; that's Ahmed driving."

Karen looked at her watch. "And it's almost time for dinner. You know, I dread the thought of sitting at the table with the others, and wondering which of them is betraying us."

"Only nine of us, instead of thirteen, and still one is a Judas," MacLeod said.

"I suppose there's always a place for Judas, at any table."

The MacLeod Team dined together, apart from their assistants and technicians and students. This was no snobbish attempt at class-distinction; matters of Team policy were often discussed at the big round table, and the more confidential details of their work. People who have only their knowledge and their ideas to sell are wary about bandying either loosely, and the six men and three women who faced each other across the twelve-foot diameter of the teakwood table had no other stock-in-trade.

They were nine people of nine different nationalities, or they were nine people of the common extra-nationality of science. That Duncan MacLeod, their leader, had grown up in the Transvaal and his wife had been born in the Swedish university town of Upsala was typical not only of their own group but of the hundreds of independent research teams that had sprung up after the Second World War. The scientist-adventurer may have been born of the relentless struggle for scientific armament supremacy among nations and the competition for improved techniques among industrial corporations during the late 1950s and early 1960s, but he had been begotten when two masses of uranium came together at the top of a steel tower in New Mexico in 1945. And, because scientific research is pre-eminently a matter of pooling brains and efforts, the independent scientists had banded together into teams whose leaders acquired power greater than that of any *condottiere* captain of Renaissance Italy.

Duncan MacLeod, sitting outwardly relaxed and merry and secretly watchful and bitterly sad, was such a free-captain of science. One by one, the others had rallied around him, not because he was a greater physicist than they, but because he was a bolder, more clever, less scrupulous adventurer, better able to guide them through the maze of international power-politics and the no less ruthless if less nakedly violent world of Big Industry.

There was his wife, Karen Hilquist, the young metallurgist who, before she was twenty-five, had perfected a new hardening process for SKF and an credibly tough gunsteel for the Bofors works. In the few minutes since they had returned to Team Center, she had managed to change her

coveralls for a skirt and blouse, and do something intriguing with her hair.

And there was Kato Sugihara, looking younger than his twenty-eight years, who had begun to demonstrate the existence of whole orders of structure below the level of nuclear particles.

There was Suzanne Maillard, her gray hair upswept from a face that had never been beautiful but which was alive with something rarer than mere beauty; she possessed, at the brink of fifty, a charm and smartness that many women half her age might have envied, and she knew more about cosmic rays than any other person living.

And Adam Lowiewski, his black mustache contrasting so oddly with his silver hair, frantically scribbling equations on his doodling-pad, as though his racing fingers could never keep pace with his brain, and explaining them, with obvious condescension, to the boyish-looking Japanese beside him. He was one of the greatest of living mathematicians by anybody's reckoning—the greatest, by his own.

And Sir Neville Lawton, the electronics expert, with thinning red-gray hair and meticulously-clipped mustache, who always gave the impression of being in evening clothes, even when, as now, he was dressed in faded khaki.

And Heym ben-Hillel, the Israeli quantum and wave-mechanics man, his heaping dinner plate an affront to the Laws of Moses, his white hair a fluffy, tangled chaos, laughing at an impassively-delivered joke the English knight had made.

And Rudolph von Heldenfeld, with a thin-lipped killer's mouth and a frozen face that never betrayed its owner's thoughts—he was the specialist in magnetic currents and electromagnetic fields.

And Farida Khourouglu, the Turkish girl whom MacLeod and Karen had found begging in the streets of Istanbul, ten years ago, and who had grown up following the fortunes of the MacLeod Team on every continent and in a score of nations. It was doubtful if she had ever had a day's formal schooling in her life, but now she was secretary of the Team, with a grasp of physics that would have shamed many a professor. She had grown up a beauty, too, with the large dark eyes and jet-black hair and paper-white skin of her race. She and Kato Sugihara were very much in love.

A good team; the best physics-research team in a power-mad, knowledge-hungry world. MacLeod thought, toying with the stem of his wineglass, of some of their triumphs: The West Australia Atomic Power Plant. The Segovia Plutonium Works, which had got them all titled as Grandees of the restored Spanish Monarchy. The sea-water chemical extraction plant in Puerto Rico, where they had worked for Associated Enterprises, whose president, Blake Hartley, had later become President of the United States. The hard-won victory over a seemingly insoluble problem in the Belgian Congo uranium mines—He thought, too, of the dangers they had faced together, in a world where soldiers must use the weapons of science and scientists must learn the arts of violence. Of the treachery of the Islamic Kaliphate, for whom they had once worked; of the intrigues and plots which had surrounded them in Spain; of the many attempted kidnappings and assassinations; of the time in Basra when they had fought with pistols and tommy guns and snatched-up clubs and flasks of acid to defend their laboratories.

A good team—before the rot of treason had touched it. He could almost smell the putrid stench of it, and yet, as he glanced from face to face, he could not guess the traitor. And he had so little time—

Kato Sugihara's voice rose to dominate the murmur of conversation around the table.

"I think I am getting somewhere on my photon-neutrino-electron interchange-cycle," he announced. "And I think it can be correlated to the collapsed-matter research."

"So?" von Heldenfeld looked up in interest. "And not with the problem of what goes on in the 'hot layer' surrounding the Earth?"

"No, Suzanne talked me out of that idea," the Japanese replied. "That's just a secondary effect of the effect of cosmic rays and solar radiations on the order of particles existing at that level. But I think that I have the key to the problem of collapsing matter to plate the hull of the spaceship."

"That's interesting." Sir Neville Lawton commented. "How so?"

"Well, you know what happens when a photon comes in contact with the atomic structure of matter," Kato said. "There may be an elastic collision, in which the photon merely bounces off. Macroscopically, that's

the effect we call reflection of light. Or there may be an inelastic collision, when the photon hits an atom and knocks out an electron—the old photoelectric effect. Or, the photon may be retained for a while and emitted again relatively unchanged—the effect observed in luminous paint. Or, the photon may penetrate, undergo a change to a neutrino, and either remain in the nucleus of the atom or pass through it, depending upon a number of factors. All this, of course, is old stuff; even the photon-neutrino interchange has been known since the mid-'50s, when the Gamow neutrino-counter was developed. But now we come to what you have been so good as to christen the Sugihara Effect—the neutrino picking up a negative charge and, in effect, turning into an electron, and then losing its charge, turning back to a neutrino, and then, as in the case of metal heated to incandescence, being emitted again as a photon.

"At first, we thought this had no connection with the spaceship insulation problem we are under contract to work out, and we agreed to keep this effect a Team secret until we could find out if it had commercial possibilities. But now, I find that it has a direct connection with the collapsed-matter problem. When the electron loses its negative charge and reverts to a neutrino, there is a definite accretion of interatomic binding-force, and the molecule, or the crystal-line lattice or whatever tends to contract, and when the neutrino becomes a photon, the nucleus of the atom contracts."

Heym ben-Hillel was sitting oblivious to everything but his young colleague's words, a slice of the flesh of the unclean beast impaled on his fork and halfway to his mouth.

"Yes! Certainly!" he exclaimed. "That would explain so many things I have wondered about. And of course, there are other forces at work which, in the course of nature, balance that effect—"

"But can the process be controlled?" Suzanne Maillard wanted to know. "Can you convert electrons to neutrinos and then to photons in sufficient numbers, and eliminate other effects that would cause compensating atomic and molecular expansion?"

Kato grinned, like a tomcat contemplating the bones of a fish he has just eaten.

"Yes, I can. I have." He turned to MacLeod. "Remember those bullets I got from you?" he asked.

MacLeod nodded. He handloaded for his .38-special, and like all advanced cases of handloading-fever, he was religiously fanatical about uniformity of bullet weights and dimensions. Unlike most handloaders, he had available the instruments to secure such uniformity.

"Those bullets are as nearly alike as different objects can be," Kato said. "They weigh 158 grains, and that means one-five-eight - point - zero - zero - zero - practically-nothing. The diameter is .35903 inches. All right; I've been subjecting those bullets to different radiation-bombardments, and the best results have given me a bullet with a diameter of .35892 inches, and the weight is unchanged. In other words, there's been no loss of mass, but the mass had contracted. And that's only been the first test."

"Well, write up everything you have on it, and we'll lay out further experimental-work," MacLeod said. He glanced around the table. "So far, we can't be entirely sure. The shrinkage may be all in the crystalline lattice; the atomic structure may be unchanged. What we need is matter that is really collapsed."

"I'll do that," Kato said. "Farida, I'll have all my data available for you before noon tomorrow; you can make up copies for all Team members."

"Make mine on microfilm, for projection," von Heldenfeld said.

"Mine, too," Sir Neville Lawton added.

"Better make microfilm copies for everybody," Heym ben-Hillel suggested. "They're handier than typescript."

MacLeod rose silently and tiptoed around behind his wife and Rudolf von Heldenfeld, to touch Kato Sugihara on the shoulder.

"Come on outside, Kato," he whispered. "I want to talk to you."

The Japanese nodded and rose, following him outside onto the roof above the laboratories. They walked over to the edge and stopped at the balustrade.

"Kato, when you write up your stuff, I want you to falsify everything you can. Put it in such form that the data will be absolutely worthless, but also in such form that nobody, not even Team members, will know it has been falsified. Can you do that?"

Kato's almond-shaped eyes widened. "Of course I can, Dunc," he replied. "But why—?"

"I hate to say this, but we have a traitor in the Team. One of those people back in the dining room is selling us out to the

Fourth Komintern. I know it's not Karen, and I know it's not you, and that's as much as I do know, now."

The Japanese sucked in his breath in a sharp hiss. "You wouldn't say that unless you were sure, Dunc," he said.

"No. At about 1000 this morning, Dr. Weissberg, the civilian director, called me to his office. I found him very much upset. He told me that General Nayland is accusing us—by which he meant this Team—of furnishing secret information on our sub-project to Komintern agents. He said that British Intelligence agents at Smolensk had learned that the Red Triumph laboratories there were working along lines of research originated at MacLeod Team Center here. They relayed the information to Western Union Central Intelligence, and WU passed it on to United States Central Intelligence, and now Counter Espionage is riding Nayland about it, and he's trying to make us the goat."

"He would love to get some of us shot," Kato said. "And that could happen. They took a long time getting tough about espionage in this country, but when Americans get tough about something, they get tough right. But look here; we handed in our progress-reports to Felix Weissberg, and he passed them on to Nayland. Couldn't the leak be right in Nayland's own HQ?"

"That's what I thought, at first," MacLeod replied. "Just wishful thinking, though. Fact is, I went up to Nayland's HQ and had it out with him; accused him of just that. I think I threw enough of a scare into him to hold him for a couple of days. I wanted to know just what it was the Komintern was supposed to have got from us, but he wouldn't tell me. That, of course, was classified-stuff."

"Well?"

"Well then, Karen and I got our digestive tracts emptied and went in to town, where I could use a phone that didn't go through a military switchboard, and I put through a call to Allan Hartley, President Hartley's son. He owes us a break, after the work we did in Puerto Rico. I told him all I wanted was some information to help clear ourselves, and he told me to wait a half an hour and then call Counter Espionage Office in Washington and talk to General Hammond."

"Ha! If Allan Hartley's for us, what are we worried about?" Kato asked. "I always knew he was the power back of Associated Enterprises and his father was the front-

man: "I'll bet it's the same with the Government."

"Allan Hartley's for us as long as our nose is clean. If we let it get dirty, we get it bloodied, too. We have to clean it ourselves," MacLeod told him. "But here's what Hammond gave me: The Komintern knows all about our collapsed-matter experiments with zinc, titanium and nickel. They know about our theoretical work on cosmic rays, including Suzanne's work up to about a month ago. They know about that effect Sir Neville and Heym discovered two months ago." He paused. "And they know about the photon-neutrino-electron interchange."

Kato responded to this with a gruesome double-take that gave his face the fleeting appearance of an ancient samurai war mask.

"That wasn't included in any report we ever made," he said. "You're right; the leak comes from inside the Team. It must be Sir Neville, or Suzanne, or Heym ben-Hillel, or Adam Lowiewski, or Rudolf von Heldendorf, or— No! No, I can't believe it could be Farida!" He looked at MacLeod pleadingly. "You don't think she could have—?"

"No, Kato. The Team's her whole life, even more than it is mine. She came with us when she was only twelve, and grew up with us. She doesn't know any other life than this, and wouldn't want any other. It has to be one of the other five."

"Well, there's Suzanne," Kato began. "She had to clear out of France because of political activities, after the collapse of the Fourth Republic and the establishment of the Rightist Directorate in '57. And she worked with Joliot-Curie, and she was at the University of Louvain in the early '50s, when that place was crawling with Commies."

"And that brings us to Sir Neville," MacLeod added. "He dabbles in spiritualism; he and Suzanne do planchette-seances. A planchette can be manipulated. Maybe Suzanne produced a communication advising Sir Neville to help the Komintern."

"Could be. Then, how about Lowiewski? He's a Pole who can't go back to Poland, and Poland's a Komintern country," Kato pointed out. "Maybe he'd sell us out for amnesty, though why he'd want to go back there, the way things are now—?"

"His vanity. You know, missionary-school native going back to the village wearing real pants, to show off to the savages. Used to be a standing joke, down where I came from." MacLeod thought for a moment.

"And Rudolf; he's always had a poor view of the democratic system of government. He might feel more at home with the Komintern. Of course, the Ruskis killed his parents in 1945—"

"So what?" Kato retorted. "The Americans killed my father in 1942, but I'm not making an issue out of it. That was another war; Japan's a Western Union country now. So's Germany— How about Heym, by the way? Remember when the Komintern wanted us to come to Russia and do the same work we're doing here?"

"I remember that after we turned them down, somebody tried to kidnap Karen," MacLeod said grimly. "I remember a couple of Russians got rather suddenly dead trying it, too."

"I wasn't thinking of that. I was thinking of our round-table argument when the proposition was considered. Heym was in favor of accepting. Now that, I would say, indicates either Communist sympathies or an overtrusting nature," Kato submitted. "And a lot of grade-A traitors have been made out of people with trusting natures."

MacLeod got out his pipe and lit it. For a long time, he stared out across the mountain-ringed vista of sagebrush, dotted at wide intervals with the bulks of research-centers and the red roofs of the villages.

"Kato, I think I know how we're going to find out which one it is," he said. "First of all, you write up your data, and falsify it so that it won't do any damage if it gets into Komintern hands. And then—"

The next day started in an atmosphere of suppressed excitement and anxiety which, beginning with MacLeod and Karen and Kato Sugihara, seemed to communicate itself by contagion to everybody in the MacLeod Team's laboratories. The top researchers and their immediate assistants and students were the first to catch it; they ascribed the tension under which their leader and his wife and the Japanese labored to the recent developments in the collapsed-matter problem. Then, there were about a dozen implicitly-trusted technicians and guards, who had been secretly gathered in MacLeod's office the night before and informed of the crisis that had arisen. Their associates could not miss the fact that they were preoccupied with something unusual.

They were a variegated crew; men who had been added to the Team in every corner of the world. There was Ahmed Abd-el-Rahman, the Arab jeep-driver who had

joined them in Basra. There was the wiry little Greek whom everybody called Alex Unpronounceable. There was an Italian, and two Chinese, and a cashiered French Air Force officer, and a Malay, and the son of an English earl who insisted that his name was Bertie Wooster. They had sworn themselves to secrecy, had heard MacLeod's story with a polylingual burst of pious or blasphemous exclamations, and then they had scattered, each to the work assigned him.

MacLeod had risen early and submitted to the ordeal of the search to leave the reservation and go to town again, this time for a conference at the shabby back-street cigar store than concealed a Counter Espionage Center. He had returned just as Farida Khourouglu was finishing the microfilm copies of Kato's ingeniously-concocted pseudo-data. These copies were distributed at noon, while the Team was lunching, along with carbons of the original typescript.

He was the first to leave the table, going directly to the basement, where Alex Unpronounceable and the man who had got his alias from the works of P. G. Wodehouse were listening in on the telephone calls going in and out through the Team-center switchboard, and making recordings. For two hours, MacLeod remained with them. He heard Suzanne Maillard and some woman who was talking from a number in the Army married-officers' settlement making arrangements about a party. He heard Rudolf von Heldenfeld make a date with some girl. He listened to a violent altercation between the Team chef and somebody at Army Quartermaster's HQ about the quality of a lot of dressed chicken. He listened to a call that came in for Adam Lowiewski, the mathematician.

"This is Joe," the caller said. "I've got to go to town late this afternoon, but I was wondering if you'd have time to meet me at the Recreation House at Oppenheimer Village for a game of chess. I'm calling from there, now."

"Fine; I can make it," Lowiewski's voice replied. "I'm in the middle of a devil's own-mathematical problem; maybe a game of chess would clear my head. I have a new queen's-knight gambit I want to try on you, anyhow."

Bertie Wooster looked up sharply. "Now there; that may be what we're—"

The telephone beside MacLeod rang. He scooped it up; named himself into it.

It was Ahmed Abd-el-Rahman. "Look, chief; I tail this guy to Oppenheimer Village," the Arab, who had learned English from American movies, answered. "He goes into the rec-joint. I slide in after him, an' he ain't in sight. I'm lookin' around for him, see, when he comes bargain' outa the Don Ameche box. Then he grabs a table an' a beer. What next?"

"Stay there; keep an eye on him," MacLeod told him. "If I want you, I'll call."

MacLeod hung up and straightened, feeling under his packet for his .38-special.

"That's it, boys," he said. "Lowieski. Come on."

"Hah!" Alex Unpronounceable had his gun out and was checking the cylinder. He spoke briefly in description of the Polish mathematician's ancestry, physical characteristics, and probable post-mortem destination. Then he put the gun away, and the three men left the basement.

For minutes that seemed like hours, MacLeod and the Greek waited on the main floor, where they could watch both the elevators and the stairway. Bertie Wooster had gone up to alert Kato Sugihara and Karen. Then the door of one of the elevators opened and Adam Lowiewski emerged, with Kato behind him, apparently lost in a bulky scientific journal he was reading. The Greek moved in from one side, and MacLeod stepped in front of the Pole.

"Hi, Adam," he greeted. "Have you looked into that batch of data yet?"

"Oh, yes. Yes." Lowiewski seemed barely able to keep his impatience within the bounds of politeness. "Of course, it's out of my line, but the mathematics seems sound." He started to move away.

"You're not going anywhere," MacLeod told him. "The chess game is over. The red pawns are taken—the one at Oppenheimer Village, and the one here."

There was a split second in which Lowiewski struggled—almost successfully—to erase the consternation from his face.

"I don't know what you're talking about," he began. His right hand started to slide under his left coat lapel.

MacLeod's Colt was covering him before he could complete the movement. At the same time, Kato Sugihara dropped the paper-bound periodical, revealing the thin-bladed knife he had concealed under it. He stepped forward, pressing the point of

of the weapon against the Pole's side. With the other hand, he reached across Lowiewski's chest and jerked the pistol from his shoulder-holster. It was one of the elegant little .32 Beretta 1954 Model automatics.

"Into the elevator," MacLeod ordered. An increasing pressure of Kato's knife emphasized the order. "And watch him; don't let him get rid of anything," he added to the Greek.

"If you would explain this outrage—" Lowiewski began. "I assume it is your idea of a joke—"

Without even replying, MacLeod slammed the doors and started the elevator upward, letting it rise six floors to the living quarters. Karen Hilquist and the aristocratic blacksheep who called himself Bertie Wooster were waiting when he opened the door. The Englishman took one of Lowiewski's arms; MacLeod took the other. The rest fell in behind as they hustled the captive down the hall and into the big sound-proofed dining room. They kept Lowiewski standing, well away from any moveable object in the room; Alex Unpronounceable took his left arm as MacLeod released it and went to the communicator and punched the all-outlets button.

"Dr. Maillard; Dr. Sir Neville Lawton; Dr. ben-Hillel; Dr. von Heldenfeld; Mlle. Khourouglu," he called. "Dr. MacLeod speaking. Come at once, repeat at once, to the round table— Dr. Maillard; Dr. Sir Neville Lawton—"

Karen said something to the Japanese and went outside. For a while, nobody spoke. Kato came over and lit a cigarette in the bowl of MacLeod's pipe. Then the other Team members entered in a body. Evidently Karen had intercepted them in the hallway and warned them that they would find some unusual situation inside; even so, there was a burst of surprised exclamations when they found Adam Lowiewski under detention.

"Ladies and gentlemen," MacLeod said, "I regret to tell you that I have placed our colleague, Dr. Lowiewski, under arrest. He is suspected of betraying confidential data to agents of the Fourth Komintern. Yesterday, I learned that data on all our work here, including Team-secret data on the Sugihara Effect, had got into the hands of the Komintern and was being used in research at the Smolensk laboratories. I

also learned that General Nayland blames this Team as a whole with double-dealing and selling this data to the Komintern. I don't need to go into any lengthy exposition of General Nayland's attitude toward this Team, or toward Free Scientists as a class, or toward the research-contract system. Nor do I need to point out that if he pressed these charges against us, some of us could easily suffer death or imprisonment."

"So he had to have a victim in a hurry, and pulled my name out of the hat," Lowiewski sneered.

"I appreciate the gravity of the situation," Sir Neville Lawton said. "And if the Sugihara Effect was among the data betrayed, I can understand that nobody but one of us could have betrayed it. But why, necessarily, should it be Adam? We all have unlimited access to all records and theoretical data."

"Exactly. But collecting information is the smallest and easiest part of espionage. Almost anybody can collect information. Where the spy really earns his pay is in transmitting information. Now, think of the almost fantastic security measures in force here, and consider how you would get such information, including masses of mathematical data beyond any human power of memorization, out of this reservation."

"Ha, nobody can take anything out," Suzanne Maillard said. "Not even one's breakfast. Is Adam accused of sorcery, too?"

"The only material things that are allowed to leave this reservation are sealed cases of models and data shipped to the different development plants. And the Sugihara Effect never was reported, and wouldn't go out that way," Heym ben-Hillel objected.

"But the data on the Sugihara Effect reached Smolensk," MacLeod replied. "And don't talk about Darwin and Wallace; it wasn't a coincidence. This stuff was taken out of the Tonto Basin Reservation by the only person who could have done so, in the only way that anything could leave the reservation without search. So I had that person shadowed, and at the same time I had our telephone lines tapped, and eavesdropped on all calls entering or leaving this center. And the person who had to be the spy-courier called Adam Lowiewski, and Lowiewski made an appointment to meet him at the



Oppenheimer Village Recreation House to play chess."

"Very suspicious, very suspicious," Lowiewski derided. "I receive a call from a friend at the same time that some anonymous suspect is using the phone. There are only five hundred telephone conversations a minute on this reservation."

"Immediately, Dr. Lowiewski attempted to leave this building," MacLeod went on. "When I intercepted him, he tried to draw a pistol. This one." He exhibited the Beretta. "I am now going to have Dr. Lowiewski searched, in the presence of all of you." He nodded to Alex and the Englishman.

They did their work thoroughly. A pile of Lowiewski's pocket effects was made on the table; as each item was added to it, the Pole made some sarcastic comment.

"And that pack of cigarettes; unopened," he jeered. "I suppose I communicated the data to the manufacturers by telepathy, and they printed it on the cigarette papers in invisible ink."

"Maybe not. Maybe you opened the pack, and then resealed it," Kato suggested. "A heated spatula under the cellophane; like this."

He used the point of his knife to illustrate. The cellophane came unsealed with surprising ease: so did the revenue stamp. He dumped out the contents of the pack: sixteen cigarettes, four tip-ends, four bits snipped from the other ends—and a small aluminum microfilm capsule.

Lowiewski's face twitched. For an instant, he tried vainly to break loose from the men who held him. Then he slumped into a chair. Heym ben-Hillel gasped in shocked surprise. Suzanne Maillard gave a short, felinelike cry. Sir Neville Lawton looked at the capsule curiously and said: "Well, my sainted Aunt Agatha!"

"That's the capsule I gave him, at noon," Farida Khourouglu exclaimed, picking it up. She opened it and pulled out a roll of collodex projection film. There was also a bit of cigarette paper in the capsule, upon which a notation had been made in Cyrillic characters.

Rudolf von Heldenfeld could read Russian. "'Data on new development of photon-neutrino-electron interchange. 22 July, '65. Vladimir.' Vladimir, I suppose, is this *schweinhund's* code name," he added.

The film and the paper passed from hand to hand. The other members of the

Team sat down; there was a tendency to move away from the chair occupied by Adam Lowiewski. He noticed this and sneered.

"Afraid of contamination from the moral leper?" he asked. "You were glad enough to have me correct your stupid mathematical errors."

Kato Sugihara picked up the capsule, took a final glance at the cigarette pack, and said to MacLeod: "I'll be back as soon as this is done." With that, he left the room, followed by Bertie Wooster and the Greek.

Hemy ben-Hillel turned to the others; his eyes had the hurt and puzzled look of a dog that has been kicked for no reason. "But why did he do this?" he asked.

"He just told you," MacLeod replied. "He's the great Adam Lowiewski. Checking math for a physics-research team is beneath his dignity. I suppose the Komintern offered him a professorship at Stalin University." He was watching Lowiewski's face keenly. "No," he continued. "It was probably the mathematics chair of the Soviet Academy of Sciences."

"But who was this person who could smuggle microfilm out of the reservation?" Suzanne Maillard wanted to know. "Somebody has invented teleportation, then?"

MacLeod shook his head. "It was General Nayland's chauffeur. It had to be. General Nayland's car is the only thing that gets out of here without being searched. The car itself is serviced at Army vehicles pool; nobody could hide anything in it for a confederate to pick up outside. Nayland is a stuffed shirt of the first stuffing, and a tinpot Hitler to boot, but he is fanatically and incorruptibly patriotic. That leaves the chauffeur. When Nayland's in the car, nobody even sees him; he might as well be a robot steering-device. Old case of Father Brown's Invisible Man. So, since he had to be the courier, all I did was have Ahmed Abd-el-Rahman shadow him, and at the same time tap our phones. When he contacted Lowiewski, I knew Lowiewski was our traitor.

Sir Neville Lawton gave a strangling laugh. "Oh, my dear Aunt Fanny! And Nayland goes positively crackers on security. He gets goose pimples every time he hears somebody saying ' $E=mc^2$ ', for fear a Komintern spy might hear him. It's a wonder he hasn't put the value of Planck's Constant on the classified list. He sets up

all these fantastic search rooms and barriers, and then he drives through the gate, honking his bloody horn, with his chauffeur's pockets full of top secrets. Now I've seen everything!"

"Not quite everything," MacLeod said. "Kato's going to put that capsule in another cigarette pack, and he'll send one of his lab girls to Oppenheimer Village with it, with a message from Lowiewski to the effect that he couldn't get away. And when the chauffeur takes it out, he'll run into a Counter Espionage roadblock on the way to town. They'll shoot him, of course, and they'll probably transfer Nayland to the Mississippi Valley Flood Control Project, where he can't do any more damage. At least, we'll have him out of our hair."

"If we have any hair left," Heym ben-Hillel gloomed. "You've got Nayland into trouble, but you haven't got us out of it."

"What do you mean?" Suzanne Maillard demanded. "He's found the traitor and stopped the leak."

"Yes, but we're still responsible, as a team, for this betrayal," the Israeli pointed out. "This Nayland is only a symptom of the enmity which politicians and militarists feel toward the Free Scientists, and of their opposition to the research-contract system. Now they have a scandal to use. Our part in stopping the leak will be ignored; the publicity will be about the treason of a Free Scientist."

"That's right," Sir Neville Lawton agreed. "And that brings up another point. We simply can't hand this fellow over to the authorities. If we do, we establish a precedent that may wreck the whole system under which we operate."

"Yes; it would be a fine thing if governments start putting Free Scientists on trial and shooting them," Farida Khourouglu supported him. "In a few years, none of us would be safe."

"But," Suzanne cried, "you are not arguing that this species of an animal be allowed to betray us unpunished?"

"Look," Rudolf von Heldenfeld said. "Let us give him his pistol, and one cartridge, and let him remove himself like a gentleman. He will spare himself the humiliation of trial and execution, and us all the embarrassment of having a fellow scientist piloried as a traitor."

"Now there's a typical Prussian suggestion," Lowiewski said.

around the table. "Did I miss something interesting?" he asked.

"Oh, very," Lowiewski told him. "Your Junker friend thinks I should perform *seppuku*."

Kato nodded quickly. "Excellent idea!" he congratulated von Heldenfeld. If he does, he'll save everybody a lot of trouble. Himself included." He nodded again. "If he does that, we can protect his reputation, after he's dead."

"I don't really see how," Sir Neville objected. "When the Counter Espionage people were brought into this, the thing went out of our control."

"Why, this chauffeur was the spy, as well as the spy-courier," MacLeod said. "The information he transmitted was picked up piecemeal from different indiscreet lab-workers and students attached to our team. Of course, we are investigating, mumble-mumble. Naturally, no one will admit, mumble-mumble. No stone will be left unturned, mumble-mumble. Disciplinary action, mumble-mumble."

"And I suppose he got that microfilm piecemeal, too?" Lowiewski asked.

"Oh, that?" MacLeod shrugged. "That was planted on him. One of our girls arranged an opportunity for him to steal it from her, after we began to suspect him. Of course, Kato falsified everything he put into that report. As information, it's worthless."

"Worthless? It's better than that," Kato grinned. "I'm really sorry the Komintern won't get it. They'd try some of that stuff out with the big betatron at Smolensk, and a microsecond after they'd throw the switch, Smolensk would look worse than Hiroshima did."

"Well, why would our esteemed colleague commit suicide, just at this time?" Karen Hilquist asked.

"Maybe plutonium poisoning," Farida suggested. "He was doing something in the radiation-lab and got some Pu in him, and of course, shooting's not as painful as that. So—"

"Oh, my dear!" Suzanne protested. "That but stinks! The great Adam Lowiewski, descending from his pinnacle of pure mathematics, to perform a vulgar experiment? With actual *things*?" The Frenchwoman gave an exaggerated shudder. "Horrors!"

"Besides, if our people began getting radioactive, somebody would be sure to claim we were endangering the safety of the whole establishment, and the national-

Kato Sugihara, returning alone, looked

security clause would be invoked, and some nosy person would put a geiger on the dear departed," Sir Neville added.

"Nervous collapse," Karen said. "According to the laity, all scientists are crazy. Crazy people kill themselves. Adam Lowiewski killed himself. Besides, a nervous collapse isn't instrumentally detectable."

Heym ben-Hillel looked at MacLeod, his eyes troubled.

"But, Dunc; have we the right to put him to death, either by his own hand or by an Army firing squad?" he asked. "Remember he is not only a traitor; he is one of the world's greatest mathematical minds. Have we a right to destroy that mind?"

Von Heldenfeld shouted, banging his fist on the table: "I don't care if he's Gauss and Riemann and Lorenz and Poincare and Minkowski and Whitehead and Einstein, all collapsed into one! The man is a stinking traitor, not only to us, but to all scientists and all sciences! If he doesn't shoot himself, hand him over to the United States, and let them shoot him! Why do we go on arguing?"

Lowiewski was smiling, now. The panic that had seized him in the hallway below, and the desperation when the cigarette pack had been opened, had left him

"Now I have a modest proposal, which will solve your difficulties," he said. "I have money, papers, clothing, everything I will need, outside the reservation. Suppose you just let me leave here. Then, if there is any trouble, you can use this fiction about the indiscreet underlings, without the unnecessary embellishment of my suicide—"

Rudolf von Heldenfeld let out an inarticulate roar of fury. For an instant, he was beyond words. Then he sprang to his feet.

"Look at him!" he cried. "Look at him, laughing in our faces, for the dupes and fools he thinks we are!" He thrust out his hand toward MacLeod. "Give me the pistol! He won't shoot himself; I'll do it for him!"

"It would work, Dunc. Really, it would," Heym ben-Hillel urged.

"No," Karen Hilquist contradicted. "If he left here, everybody would know what had happened, and we'd be accused of protecting him. If he kills himself, we can get things hushed up; dead traitors are good traitors. But if he remains alive, we must disassociate ourselves from him by handing him over."

"And wreck the prestige of the Team?" Lowiewski asked.

"At least you will not live to see that!" Suzanne retorted.

Heym ben-Hillel put his elbows on the table and his head in his hands. "Is there no solution to this?" he almost wailed.

"Certainly; an obvious solution," MacLeod said, rising. "Rudolf has just stated it. Only I'm leader of this Team, and there are, of course, jobs a team-leader simply doesn't delegate." The safety catch of the Beretta clicked a period to his words.

"No!" The word was wrenched almost physically out of Lowiewski. He, too, was on his feet, a sudden desperate fear in his face. "No! You wouldn't murder me!"

"The term is 'execute,'" MacLeod corrected. Then his arm swung up, and he shot Adam Lowiewski through his forehead.

For an instant, the Pole remained on his feet. Then his knees buckled, and he fell forward against the table, sliding to the floor.

MacLeod went around the table, behind Kato Sugihara and Farida Khourouglu and Heym ben-Hillel, and stood looking down at the man he had killed. He dropped the automatic within a few inches of the dead renegade's outstretched hand, then turned to face the others.

"I regret," he addressed them, his voice and face blank of expression, "to announce that our distinguished colleague, Dr. Adam Lowiewski, has committed suicide by shooting, after a nervous collapse resulting from overwork."

Sir Neville Lawton looked critically at the motionless figure on the floor.

"I'm afraid we'll have trouble making that stick, Dunc," he said. "You shot him at about five yards; there isn't a powder mark on him."

"Oh, sorry; I forgot," MacLeod's voice was mockingly contrite. "It was Dr. Lowiewski's expressed wish that his remains be cremated as soon after death as possible, and that funeral services be held over his ashes. The big electric furnace in the metallurgical lab will do, I think."

"But . . . but there'll be all sorts of formalities—" the Englishman protested.

"Now you forget. Our contract," MacLeod reminded him. "We stand upon our contractual immunity; we certainly won't allow any stupid bureaucratic interference with our deceased colleague's wishes. We

have a regular M.D. on our payroll, in case anybody has to have a death certificate to keep him happy, but beyond that—" He shrugged.

"It burns me up, though!" Suzanne Maillard cried. "After the spaceship is built, and the Moon is annexed to the Western Union, there will be publicity, and people will eulogize this species of an Iscariot!"

Heym ben-Hillel, who had been staring at MacLeod in shocked unbelief, roused himself.

"Well, why not? Isn't the creator of the Lowiewski function transformations and the rules of inverse probabilities worthy of eulogy?" He turned to MacLeod. "I couldn't have done what you did, but maybe it was for the best. The traitor is dead; the mathematician will live forever."

"You miss the whole point," MacLeod said. "Both of you. It wasn't a question of revenge, like gangsters bumping off a double-crosser. And it wasn't a question of whitewashing Lowiewski for posterity. We are the MacLeod Research Team. We owe

no permanent allegiance to, nor acknowledge the authority of, any national sovereignty or any combination of nations. We deal with national governments as with equals. In consequence, we must make and enforce our own laws.

"You must understand that we enjoy this status only on sufferance. The nations of the world tolerate the Free Scientists only because they need us, and because they know they can trust us. Now, no responsible government official is going to be deceived for a moment by this suicide story we've concocted. It will be fully understood that Lowiewski was a traitor, and that we found him out and put him to death. And, as a corollary, it will be understood that this Team, as a Team, is fully trustworthy, and that when any individual Team member is found to be untrustworthy, he will be dealt with promptly and without public scandal. In other words, it will be understood, from this time on, that the MacLeod Team is worthy of the status it enjoys and the responsibilities concomitant with it."

THE END.

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# CONFORMITY EXPECTED

By H. B. FYFE

*That somebody was crazy was beyond question; the question was, however, who was off the beam—and where?*

BILL LANG peered over the pilot's head, his big hands with the wrench-scarred knuckles resting lightly upon the other's lean shoulders.

"Right one, Lou?" he asked.

"If I held Finley's calculation right side up, it is," answered d'Andrea.

He began to whistle a tune popular when they had left Earth over three months earlier, thoughtfully dragging all the gaiety out of it.

The small, bluish planet on the tele-screen was Kaolo, Procyon VI—they hoped. There was some possibility of error.

"I don't believe in spitting on blueprints I can't read," said Lang, hunching his heavy shoulders uneasily, "but could he go far wrong in only eleven light-years?"

D'Andrea drummed slim fingers on the metal surface of the control desk.

"No, even I can tell that it's Procyon," he decided. "I just hope we don't have to shuffle around from one planet to another to find the company's base."

"Why should we?" demanded a new voice. "Got us lost already, d'Andrea?"

Lang felt the pilot's shoulders stiffen. He removed his hands and turned to face the other member of the freighter's crew. Dave Finley, the astrogator, slid the door shut behind him and slouched into the room.

"I see I can hardly trust you long enough to go for an aspirin, much less to sleep an hour."

His voice was high and nasal, not quite a whine.

"What hurts this time?" asked d'Andrea unfeelingly.

Finley cast him a sullen glance. He ran a pudgy hand through his sandy hair and all but pouted. Lang diverted his own eyes

uncomfortably from the pale face. It was becoming difficult to remember that Finley had not been well for more than a month.

He thought to himself that the Solarian Export Company could afford a spare man on the short-range interstellar ships. True, nearly everything but part of the thinking was done mechanically; but he, for one, did not know how to weld together a worn out human nervous system.

Finley had been scaring them for some time. They depended upon him for locating landing places in the dead emptiness of space. With the magnitudes of interstellar distances and speeds, precise accuracy was required of an astrogator.

*But what if you know your astrogator is scared silly?* Lang thought, moving toward the door.

"I better get back an' see that everything's in working order for the landing," he muttered.

"Something wrong?" asked Finley sharply.

He peered anxiously at Lang. The mechanic noticed that perspiration was shining on the other's fleshy face.

"What's the matter, d'Andrea?" shrilled Finley. "You'll get us killed, landing with something wrong with the ship—"

"Nothing's wrong—with the ship!" said d'Andrea disgustedly.

"Calm down, Dave," said Lang.

"Calm down! How can I, with this pain in my shoulder?"

He fumbled at the loose collar of his shirt, breathing hard.

"Bill," said d'Andrea, still peering at the screen.

"Yeah?"

"I'll be busy in a few minutes. Keep him out of my way."

"Come on, Dave," wheedled Lang. "Help me check the automatics."

He gestured toward the door, but the astrogator shrank away. Finley backed against the cabinet containing their space-suits. He licked his lips and panted. With dilated pupils, he stared over Lang's shoulder. The pulse in his neck throbbed wildly.

"What's the matter?" asked Lang.

"You know what the matter is. Why doesn't one of you *do* something? No—you'd rather let us be killed!"

D'Andrea's red-gold head was bent over his dials. He fingered certain buttons on his control panel thoughtfully.

Finley crouched by the cabinet, looking trapped. Lang, watching him, felt uncomfortable at seeing his fear. The astrogator's continual worrying and complaining had made him hard to live with during the past few weeks.

Lang suddenly sensed trouble. Finley was motionless, but not really quiet. Beneath the surface was turmoil.

D'Andrea's fingers tensed. He pressed the buttons.

As they felt the vibration of the steering blasts, Finley lost all control. Howling, he flung himself at the pilot.

Lang grabbed him around the body, trying to pull him down. Without normal Earth gravity, however, his weight was of little use. Just before Finley had dragged them both to within reach of the control desk, Lang shifted and heaved him off his feet.

D'Andrea flicked a cool, blue glance over his shoulder, then returned his attention to the controls, the dials, the calculations, and the time. They were on their way down.

About three hours later, d'Andrea contacted Solarian Export's station on Kaolo, and received directions to the company's reservation. They landed shortly thereafter.

Lang checked that Finley, strapped into his bunk, was all right. The mechanic tenderly pinched the bruised mark on his left forearm, to see if the bleeding had really stopped. Despite his effort to make allowances, he resented that.

"Fine thing," he grumbled to himself. "Bitin' a fellow you been livin' with. I shoulda hit him."

He went forward and found d'Andrea locking the controls.

"What are you gonna do, Lou?" he asked glumly.

D'Andrea pulled on a uniform jacket,

shrugging his shoulders at the unfamiliar feeling after months in space.

"First thing," he said, "we'd better see the factor and ask him if he has an Earthman doctor here."

"That bad?"

"Sure. Look it up in the tables. He's out of his orbit."

"What if there ain't a doctor—how do we get back?"

"Get another astrogator somehow, unless you want to try it."

Lang grimaced and shook his head. They made sure Finley's door was securely locked, then opened an exit port. Leaving the ship, they discovered a small ground pickup waiting.

It was driven by a deeply tanned Earthman. Beside him squatted a handsome, four legged animal about the size of a leopard. Its fur was dark brown, with lighter areas on the round head. The gray color of the skin, showing on the pushed-in snout, was not disturbing; but to the Earthmen, the two tentacles growing from the back of the neck seemed disproportionately heavy.

"Don't pay no mind tuh them," said the driver, noting their stares. "Tha's whut they use fer arms."

"Kinda big for a pet, ain't it?" asked Lang.

The driver looked at him with an embarrassed, pitying smirk. He shrugged ruefully.

"I owe you an apology, James," said the Kaolan, in a humming but distinct voice. "Yesterday, I said *you* were stupid."

He stared at Lang and d'Andrea, smiling unpleasantly with pinkish teeth. Lang turned red and climbed into the rear seat. After directing a hard look between the Kaolan's black eyes, d'Andrea followed.

They were driven in silence to the one-story administration building. This was constructed of white rock and decorated with a few scrubby bushes, the largest form of vegetation in sight. The Kaolan jumped down with a heavy grace.

"Return to the garage, James," he told the driver. "Earthmen, my name is Munaaz. I will take you to the factor, Cowper."

They gave Munaaz their names and followed him into a wide hall. They glimpsed several offices, with many of the desks occupied by Kaolans.

Munaaz padded into a large office, where he introduced them to George Cowper. The man in charge of the base of the Solarian Export Company was of medium height,

lean, with sandy-gray hair and faded but alert blue eyes. Like the driver, he had a deep tan, and fine wrinkles around his eyes made his skin seem dried-out when he smiled.

"Thought you had three in the crew," he remarked, waving them to chairs.

"We have," said the pilot. "As a matter of fact, I'd like a word with you about that."

Munaaz settled himself comfortably on a leather-covered ottoman. He curled one forefoot stiffly downward, but seemed prepared to listen at his ease. D'Andrea looked annoyed.

"Do you have a doctor at the reservation here?" he asked.

"Of course. Your man got anything contagious?"

"No, it's not that," said d'Andrea.

"Kaolan doctors are much better," observed Munaaz.

He rose to push a button set beside the window. The opaqueness of the latter changed and Procyon's glare lit the office. From a tiny movement at the corners of Cowper's mouth, Lang realized that the factor suffered from Munaaz chronically.

D'Andrea surrendered to Munaaz's patience.

"To tell the truth, Mr. Cowper, Finley seems to have a nervous breakdown, or something."

"No such thing, even in Earthmen," declared the Kaolan. "You mean he allowed himself to become mentally disorderly?"

*Disorderly!* thought Lang. *Cowper has a good poker face.*

Nevertheless, without actually changing expression, the factor gave the impression of being uncomfortable.

"An Earth psychiatrist is not permitted by charter," he said.

"Kaolans," announced Munaaz, "have great interest in the thinking processes of other forms of life."

Lang felt like something in a jar.

He wished that the Kaolan would stop swinging his tentacles to and fro, touching the tips in front and then behind his back almost like a man exercising with Indian clubs. In a minute, he supposed, Munaaz would want to know Finley's symptoms.

"How does your friend act?" asked Cowper, as if someone must.

D'Andrea told him. Lang added a few details.

"Needs a rest, I suppose," agreed Cowper sadly. "And I wanted you to take those precision tools over to Procyon V."

"What?" D'Andrea demanded.

"Yes, for a colony the Kaolans are building up on the next planet."

"Just an experimental outpost," Munaaz assured them. "Of course, we are perfectly satisfied with our present location."

Lang wondered who cared, but he noticed that Cowper accepted the remark as a matter of course.

"Well, I don't like risking it by myself," said d'Andrea.

Munaaz rolled dark eyes at him and patted his tenacle tips together six or eight times, with excited speed.

"Have a solution," he said. "Leave him here while you go to Uameed. Before you return, we will restore him to order."

"How do we get there?" objected the pilot.

"We will make a Kaolan astrogator go with you."

"Well, don't *force* anyone on our account!" cried d'Andrea, his voice soaring to the defiant tone of a belligerent tomcat.

"It is a small thing," insisted Munaaz. "I myself could do it, being a mathematician."

"You?"

"Oh, yes. I studied the subject as part of a program to learn distances of outer astronomical bodies. Astrogation would be simple."

They turned to the factor. Cowper said he had to admit that the Kaolans accomplished remarkable things in psychology. Lang sensed a hint of reservation, but Munaaz began a sales talk.

It was so simple. The Earthman astrogator had merely become afraid, because of a mental conflict. He was fatigued, or unsure of himself. The Kaolans could find the trouble quickly. Very quickly. It would take perhaps five days to make the round trip to Uameed. Finley would be recovered before then.

In fact, the Kaolans would blame themselves if he should leave in such an erratic condition. Conformity to normal straight thinking was expected on Kaolo.

"Go get your boy," advised Cowper, sighing. "While Munaaz takes him away and finds a substitute, I'll brief you on Uameed."

In the end, Cowper saw them off with a Kaolan named Yeeuli.

"Just take it easy, boys," was his parting advice. "Keep your screens focused and your transmitter quiet."

When the officious Munaaz had bustled off with Finley, the factor had thought the spacemen close to making some sharp re-

marks. He hoped they would change their attitude; but he rather feared they would not, especially upon finding Yeeuli just as typical of his people as was Munaaz.

It so happened that when they returned from Uameed, the fifth planet of Procyon, Cowper witnessed d'Andrea's landing from the doorway of the administration building.

"Not as good as he was last time," he murmured to himself.

He saw three figures scramble out of the exit before the pickup even reached the ship. One made for the vehicle, but the other two brushed it aside, clambered in, and left the first figure gesticulating in a cloud of dust. It immediately set out at a gallop for another part of the landing field.

Cowper sighed and returned to his office. Presently, d'Andrea and Lang stamped down the hall and burst in on him.

D'Andrea pointed a shaking finger at the factor and opened his mouth. The words seemed to choke in his throat.

"You look," said Cowper mildly, "like a couple of young fellows who just found out that Kaolo is the official center of the universe.

The pilot swore. Lang merely growled wordlessly.

"You knew!" d'Andrea accused. "You could have told us what we were getting for an astrogator"

"Sunsports on the brain, that's what he's got," said Lang.

"They are all the same, boys," said Cowper.

"Doesn't seem to bother you," d'Andrea commented acidly.

"You can get used to anything," the factor told him. "As soon as you can say with a straight face that you really believe they have the inside orbit on the galaxy, you get along fine."

"Did you ever spend two weeks locked in with one of them? I was beginning to feel like a moron!"

"How smart are they?" asked Lang.

"Oh . . . about our equal, with less general information," said Cowper. "Trouble is, they are absolutely sure they are perfect, as well as being the very middle of everything. Some even object to a colony as far away as Uameed."

"Sacrilege!" quoted d'Andrea, throwing up his hands. "I know. Yeeuli was against it."

"All right, so they're all supernovas!" complained Lang. "Why didn't he say we were dumb and let it go at that?"

"Oh, that would not be enough," said the factor. "You may be barbarian Earthmen, but you still have moral rights. Yeeuli was obligated to help you reach opinions that conform."

D'Andrea looked about as if he would like to spit. He slumped into a chair.

"Two weeks," he groaned. "Swinging those tentacles back and forth while he told me what was wrong with my mind!"

"Thought I'd let him 'adjust' my automatics," muttered Lang darkly. "Say, don't they ever sit comfortable?"

"You noticed that?" asked Cowper. "Just some folderol about maintaining awareness of their physical limitations, as near as I can gather from hints."

He allowed them to brood for a while, then suggested that they get back to their ship and requisition any supplies they might need for the flight back to Earth.

The spacemen got a ride out to the ship, saw to the necessary details, and slept. When they were summoned next to Cowper's office, it was still "afternoon" on Kaolo.

The factor had their papers ready, and said that Munaaz was bringing Finley. In a few minutes, the latter pair arrived.

Munaaz and Cowper exchanged greetings, and everyone took a seat. Finley, like the Kaolan, chose one of the ottomans.

"How do you feel, Dave?" asked Lang.

"Better than I ever did before," replied the astrogator.

He crossed one leg over the other, pointing the foot stiffly downward. Lang thought he was still a bit nervous, although his sullen expression had vanished.

Munaaz turned to the other spacemen.

"Yeeuli is very discouraged with you," he charged.

"Likewise," said d'Andrea succinctly.

Munaaz exercised his tentacles with several swings.

"We are happy to accept your products," he began. "Some of them we have not had time to develop for ourselves."

"Oh, is that it?" commented the pilot sourly.

"Moreover, we would not refuse you enlightening contact with us. Why, then, did you lock Yeeuli into the observation dome?"

"He'd already played every music wire about three times," said Lang. "It was the only way we could get any sleep."

"Ah, so? But, on the whole, your behavior has us worried."

Cowper interrupted to suggest that it did



not matter too much, since the Earthmen were about to leave for their own system. He would arrange for them to pick up a cargo at a planet of a small star on their way.

"But are they competent to leave?" objected Munaaz. "One we cured, but—"

"Arrgh!" said Lang.

"You see?" Munaaz asked Cowper. "The one had what you Earthmen, judging from your recordings, would call an anxiety state. I do not feel satisfied that the others are normal."

"You must remember," said Cowper, "that on Earth, their abnormality would not be noticed, might even be an advantage."

"That may, unfortunately, be true," admitted the Kaolan. "It is another proof of our superior position. Nevertheless, we ought to help them to mold their thoughts."

D'Andrea had been fidgeting impatiently. Now he spoke.

"How about it, Dave? Want to check your things before we sign the inspection slip?"

"I suppose I had better," said Finley reluctantly. "I really do not feel like leaving here, but—"

"You will be back," said Munaaz, smiling encouragingly with his pinkish teeth.

Lang thought that the Kaolan's tone had been less impersonal than when he had spoken to the other Earthmen.

He and d'Andrea accompanied the astro-gator out to the ship. Nothing remained to be done before leaving, but Finley wandered about with a disapproving attitude.

"What's the matter?" asked d'Andrea finally. "Did Yeeuli hide your calculator?"

"No, no, a Kaolan would not do such a thing. But I feel that much about this ship is unsatisfactory. Besides, it is very foolish, now we are here, to go out again."

"Out?" repeated Lang.

"This is the center of culture of the universe," protested Finley. "Can you not feel it, even in your ignorance?"

Lang and the pilot exchanged glances.

"What did they say was wrong with you?" asked d'Andrea.

"Oh, that . . . I hardly remember how I felt before."

He saw their looks, as he seated himself on the deck.

"Honestly, fellows, you ought to have a talk with Munaaz. He could convince you—"

"—that I ought to stuff your head into one of the jets before we take off," exclaimed d'Andrea. "Look at him, Bill."

Finley was sitting comfortably except that he held one hand and forearm pointing stiffly downward, the forefinger extended toward the deck.

*The deck, Lang wondered, or the center of Kaolo?*

"Listen, Finley," he said, "are you sure you're all right? Can you figure your courses O.K.?"

Finley squirmed as if he would prefer to avoid the subject. D'Andrea immediately demanded reassurance.

"It will come back to me, no doubt," said Finley. "Could we turn on the record player? It is very depressing in here."

"What do you *mean*—it'll come back to you?" bellowed d'Andrea. "Don't you remember any astrogation?"

Finley made a condescending gesture for silence.

"You would hardly understand," he said. "We have been parted only a few solar days; but mentally, I have lived much longer than that, backward and forward in my mind. It seems a very long time since I last worked an astrogation problem."

D'Andrea flung his head back and spread his arms wide. Even his red-gold hair gave the impression of standing up.

"It will be all right," soothed Finley. "Of one thing I am sure—I can always find our way safely back here."

Lang felt a nightmarish numbness.

"Wait a minute, Lou," he murmured to the pilot, who was groping toward verbal expression by shaking a bunch of fingers under Finley's nose. "We better take it to Cowper. He can tell us if this is permanent."

Finley smirked at him pityingly, but made no objection to leaving the ship. He seemed, in fact, happier to do so.

Before reaching Cowper's office, d'Andrea regained the power of speech. He explained emphatically to the factor how they felt about going into space with an astro-gator in Finley's condition.

The individual mentioned sighed and took on a martyred expression. Appearing to find the conversation oppressively quiet, he hummed a tune to himself and swung his arms casually back and forth.

"Just look at him!" d'Andrea finished. "Does he look as if he can think straight?"

Finley bridled slightly.

"I can think a good deal straighter than you, if you only knew it."

He stalked out of the office, swinging his arms indignantly.

Cowper turned to the others. For the first time since they had met, Lang thought he looked concerned.

"Listen, boys," he said. "My guess is he will stay that way. I have seen it once or twice before. They filled him so full of their ideas, at a time when he had been made peculiarly susceptible to them, that he hardly thinks humanly now."

D'Andrea swore.

"No need to take it that way. He is probably quite content. Just imagine how you would feel if you were accepted into a culture which set to rest all your doubts about the universe."

He squinted at them searchingly, the fine wrinkles around his eyes reminding them of his age.

"All your doubts," he repeated. "We all have some, but Kaolans just *know* the answers to everything.

"Personally," he continued, "I just keep my mouth shut and try to rub their fur the right way. Good business. But the point now is what you want to do."

"What I *don't* want to do," declared Lang, "is trust him to get us home. I'd rather gamble on d'Andrea, from star to star."

"Can you dig up an astrogator anywhere?" asked the pilot.

"I can try," said Cowper. "Not many stop off here."

"While you do," said d'Andrea, "I'm going back to the ship and open a bottle we've been saving."

"Not something you bought here?" asked Cowper quickly.

"No, Earth stuff. Why?"

"Don't fool with the Kaolan products. There was an Earthman who got left behind that way a few months ago—"

He hesitated and snapped his fingers.

"Say! He was third officer on a big, deep-space ship. How much astrogation would he know?"

"Plenty," said d'Andrea promptly. "They stay out for years. Part of his job to know it, just in case."

"And you think he could get back to Earth from here?"

"Just tell us where to find him!" said the pilot.

Cowper told them that the spaceman, Steffens, had been given a room at the re-

servation to keep him out of further trouble. If not there, he might be at the bar of the recreation building.

"We have him weaning on Earthtype beer," he called as Lang and d'Andrea whirled out of the office.

They hurried over to the living quarters, to be faced with a long hallway of similar doors. Lang saw a carton standing outside one. It was a box of canned beer. He knocked.

The door was opened eventually by a tall, yawning redhead, on whose chin glinted a golden red stubble. He was badly freckled, but well-mellowed.

"You, Steffens?" inquired the direct d'Andrea.

The redhead nodded amiably. He took the carton from Lang.

"Must have been delivered while I was busy," he drawled.

"Think you could compute a curve for Sol?" asked d'Andrea.

"Got about twenty or thirty precalculated," grinned Steffens. "Had time on my hands in this place."

"We're from that ship out on the field. We need an astrogator. I hear you could use a job."

Steffens apparently had been unemployed for some time. The promise of full pay convinced him. They took time only for a round of beer and to pack Steffens' few personal belongings, including a portfolio of calculations. Lang brought the beer.

Aboard the ship, d'Andrea asked how soon they could leave.

"From what I hear," said Steffens, "the sooner the better. That Kaolan you had with you to Uameed is raising a stink."

"He's raising a stink!" exclaimed d'Andrea.

"You guys *are* air-tight in the head, aren't you? I heard there's talk of holding you up for observation."

"You want the job? Show us a curve!"

Steffens chose a course calculation from his supply, and laid the portfolio on the edge of the control desk.

"That ought to put us in position for interstellar drive."

D'Andrea immediately began to check his controls.

"Guess you'll be glad to get into space," said Lang.

"Sure am," Steffens said, stretching his long arms.

"Heard about our other man taking the cure?"

"Yeah. Gotta watch these Kaolans. They get you down."

"Been here long?" asked Lang.

"Just long enough to sober up and get my true bearings."

D'Andrea's attention was on his instruments, but Lang saw the new astrogator stop stretching and began to swing his arms to and fro. The mechanic began to worry.

"You got a music player?" asked Steffens. "This place could use a little cheering up."

"It don't work any more," said Lang shortly.

Steffens shrugged. He began to potter about. Lang thought he was pale behind the freckles, perhaps growing sober.

"You close the port yet?" asked the redhead suddenly.

D'Andrea looked up.

"Not yet. Forget something?"

"No . . . I . . . that is—" He swallowed. "B'lieve I'll just step out for a breath of air—"

They watched him leave the control room. Then, with a sudden premonition of loss, both leaped to follow.

They found Steffens leaning dejectedly against the hull.

"What hit you?" demanded d'Andrea.

"Come on inside," urged Lang. "Here come Cowper and Munaaz in that one-lung taxi!"

Steffens shook his head silently. The pickup, guided by the same leather-faced driver, pulled up before them. Cowper and the Kaolan alighted.

"Where are you going?" asked Munaaz upon noticing Steffens.

"Nowhere, I guess," mumbled the redhead. "I needed beer money, but when I began to think maybe I couldn't get a berth back again, it didn't look so good—"

"What's the matter?" d'Andrea snorted. "We got the plague?"

Cowper raised a hand at him. Munaaz paid no attention.

"Of course, Red One," he said, smoothing his brown fur, "if you wish to go, it may be safe. You have had enough instruction to maintain your mental balance until you return."

"No . . . I . . . sorry, fellows," muttered Steffens, looking away. "Guess I'm used to it here. B'lieve I'll go have a drink."

He trudged away without glancing back.

"Drinking is the one fault he retains," said Munaaz.

He stared contemplatively after the Earth-

man. Cowper took the moment to explain that Finley had begged for a job with the factor. The latter had been reluctant to waste the advantage it would give him in dealing with the natives.

"Well, I guess I'll get back to the office," he said. "I'll see you boys later. Coming, Munaaz?"

"You go ahead," suggested the Kaolan. "James can return for me."

When the pickup had left, Munaaz turned to Lang and d'Andrea.

"How do you feel?" he asked.

"What do you mean?" countered d'Andrea, as if he knew very well what was meant, and resented it.

"Are you at all disturbed mentally?"

"Only at not having an astrogator," said the pilot.

"I cannot see how you can continue with that attitude."

"Honestly, we're just like millions of other Earthmen. Let's get inside, Bill."

"Take your time," muttered Lang.

He had been gazing sullenly at the slouching figure in the distance. Steffens reached the recreation building and disappeared within. Deep inside his stolid system, Lang was beginning to generate steam. Too many annoying frustrations, too many obstacles. He wished he could pop off like d'Andrea, and have it over.

"Sometimes I wonder," he mused aloud.

"I always thought of Earthmen as being normal, but who can say what's normal?"

"Interesting," said Munaaz. "It indicates hope for you."

"Oh, don't think Earthmen are dumb," said Lang. "We can take the facts when we see them. But how to get them?"

"What's bending your orbit?" asked d'Andrea.

"Do not interrupt him," said Munaaz, showing his pinkish teeth in a friendly smile. "I can see that all your Earth needs is someone to explain the proper view of the universe."

"But who could do it?" complained Lang.

"I could," mused Munaaz. "It is really my duty—"

"No!" shouted d'Andrea. "Whatever you two—"

"Oh, shut up, Lou!" said Lang, grabbing the pilot's elbow in a big hand and shoving him into the port. "We can't expect Munaaz to do it, even if he does know enough math to astrogate."

"Why, yes!" hummed Munaaz, whipping

his tentacles rapidly back and forth. "Of course. What an opportunity!"

D'Andrea caught Lang's wink, and restrained himself.

"If you think you ought to, Munaaz," said Lang, "why not get aboard right now? Yeeuli left everything you'll need. We can radio back to Cowper about it."

Munaaz admitted enthusiasm. To cure a whole planet of wrong thinking! On second thoughts, however, he decided that the idea would be unfair to his fellow Kaolans.

*Sometimes, thought Lang, it's better to be big than smart. I'm sick of this deep thinking and polite talk.*

He took a quick step to his right, whirled, and grabbed Munaaz around the middle. He heaved the dumfounded Kaolan off the ground and staggered into the entrance port.

"Bill! What—"

D'Andrea's curiosity was sidetracked as the still speechless Kaolan began to struggle, and the pilot was caught between Lang's back and the bulkhead.

"Earthman! Restrain yourself!" demanded Munaaz, seizing the edge of the inner doorway with a tentacle.

"I can't!" yelled Lang. "I don't know what I'm doing!"

He trod on the tentacle. Munaaz bleated and let go. Amid a great deal of thrashing about and thudding against bulkheads and furnishings, Lang and his captive juggernauted along the short corridor to Finley's old cabin.

D'Andrea, hands clasped over his solar plexus, staggered up as the mechanic suc-

ceeded in forcing Munaaz inside and locking the door. Lang turned the pilot to face toward the control room.

"Button her up and check for take-off," he ordered.

"Earthman!" called Munaaz, his humming voice muted by the metal door. "Listen to me! I must put your mind in order."

"What about the people of Earth?" demanded Lang.

"Yes," agreed the Kaolan. "That may be my destiny. But I must begin with you."

"I'll be back after take-off. Strap yourself in that bunk."

He went to the control room, where he found d'Andrea ready.

"You had me worried for a minute," said the pilot. "Think we can trust him to astrogate?"

"We still have Steffens' calculations," said Lang, strapping himself into the astrogator's seat. "That's not all I wanted."

"What else?"

"The chance to see how a know-it-all Kaolan makes out in a culture where *he's* the one out of step."

D'Andrea lifted the ship smoothly.

"You'll have to keep up some act, or you'll be 'cured'!" he murmured. "What can we say when we land on Earth?"

"Tell the same story we gave the Kaolans about Finley," said Lang vindictively. "What they can cure, we can cure!"

The image of Kaolo on the screen began gradually to shrink. Munaaz was on the way to his triumph.

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# A Matter of Matter

By L. Ron Hubbard

You have seen the gaudy little shops along Broadway. Well, this is a warning not to patronize them.

Planets can be bought perfectly legally from the Interior Department of the Outer Galactic Control and you don't have to follow up the ads you read and hear over the radio, for no matter what they say, there is many a man who would be in much better health today if he had not succumbed to:

IT'S A POOR MAN  
WHO ISN'T KING  
IN SOME CORNER  
EMPIRES FOR A PITTANCE  
THRONES FOR A MITE.  
Easy payments, Nothing Down  
Honest Mike

It sounds so simple, it is so simple. Who would not be an Earthman in this vital day? But who would be a fool?

Chuck Lambert was not exactly a fool. He was top-heavy. He let his imagination sweep away all such things as petty logic, shaped up the facts into something which satisfied his dreams and went merrily along, auto-blinded to anything which shadowed what he wanted to believe. Lady Luck, that mischievous character, is sometimes patient with a fool—and sometimes she loads with buckshot and lets him have it.

When he was eighteen Chuck Lambert, having precociously finished college, got a job moving packing cases and found, after six months of it, that his boss, a septuagenarian named Coley, received exactly three dollars a day more than Chuck and had had to wait forty years for his advancement. This was a blow.

Discouragement lasted just long enough to call Chuck's attention to Madman Murphy, the King of Planetary Realtors, whose magnificent display, smooth conversation, personal pounciness and assumption that Chuck had decided before he had closed a deal, opened wide the gate to glory.

Chuck was to work hard and invest every dime he could scrape into Project 19453X. This included, when it was at last paid for, a full and clear deed of title, properly recorded and inviolate to the end of time to

heirs and assigns forever, to the Planet 19453X. Murphy threw in as the clincher, free rental of a Star-Jumper IV and all supplies for the initial trip.

When he was out on the sidewalk, Chuck suddenly realized that it was going to take him eleven years of very hard work to pay for that planet, providing he starved himself the while and had no dates, and he went back in to reason with Madman Murphy.

"Look, Mr. Murphy, it listens to reasons that all these minerals and things are worth a lot more than the price. I'm more valuable on that planet than I am here working as a clerk. Now what I propose—"

"Young man, I congratulate you!" said Murphy. "I envy your youth and prospects! God speed and bless you!" And he answered the phone.

An aide took Chuck back to the walk and let him reel home on his own steam. He couldn't afford now, an airlift. He had eleven long years before him when he couldn't afford one. He was perfectly free to walk unless his shoes wore out—no provision having been made to replace them in this budget of eighty percent of pay. He was particularly cheered when the aide said, "Just to stiffen your resolution, and for no other reason because Madman Murphy really likes you, you understand that this is no provisional contract. If you don't pay, we garnishee your pay for the period and keep the planet, too. That's the law and we're sorry for it. Now, God bless you and good-by."

As the months drifted off the calendar and became years, Chuck Lambert still had his literature to console him but nothing else. It is no wonder that he became a little lopsided about Planet 19453X.

He had a brochure which had one photograph in it and a mimeographed sheet full of adjectives, and if the photograph was not definitely of his planet and if the adjectives did not add into anything specific, they cheered him in his drudgery.

Earth, at this time, had a million or more planets at its disposal, several hundred thousand of them habitable and only a hundred and fifty colonized. The total re-

venue derived by Earth from these odds and ends of astronomy was not from the colonies but from the sale of land to colonists. The normal price of land, being about one and one half cents an acre, on New World was a fair average price for all properly colonized planets. Unsurveyed orbs, nebulously labeled, "Believed habitable," were scattered over the star charts like wheat in a granary.

On the normal, colonized planet, Earth's various companies maintained "stations" where supplies, a doctor and a government of sorts were available. On Planet 19453X there would be no doctor, no supplies, and no government except Chuck Lambert.

He realized this in his interminable evenings when he sat, dateless, surrounded by technical books, atlases and dirty tea cups. The more he read of the difficulties overcome by the early colonizers on warrentedly habitable planets, the thinner his own project began to seem.

He would cheer himself at these times by the thought that the whole thing was only costing him twenty-five thousand dollars and blind himself to the fact that better known bargains often went for two hundred fifty dollars on the government auction block. Chuck was top-heavy with imagination. He let it be his entire compass.

At the end of three years he had made a great deal of progress. The librarian had come to know him. She was a pleasant young thing who had her own share of imagination—and troubles—and it gave her pleasure to dredge up new books for Chuck to imbibe. Her guidance—her name was Isabel—and his voracity put him through medicine by the time four years had passed, electronics by five and a half, geology by six, mineralogy by seven, government theory by seven and a quarter, space navigation by eight, surveying by nine and all the rest of the odds and ends by eleven.

She was rather good looking, and when she had finally lost her first, elementary desire to marry a millionaire, she began to understand that she was in love with Chuck. After all, when you spend eleven years helping an ambitious young man to plow through a dream, you are likely to be interested in him.

She would have gone with him without another thought if he had asked her. But his last visit to the library was a very formal one. He was carrying a bouquet and he said a little speech.

"Isabel, I hope some day to prove a worthy investment of your time. I hope to be able to bring you a three-headed butler or maybe a dog in a match box to show my appreciation of your interest. Tomorrow I am faring forth. Good-by."

This was all with some embarrassment. He wanted to ask her but he was afraid of her a little, libraries having that air.

She took the bouquet and suddenly realized she was able to cry. She wanted to say something close and intimate, something to cheer him in his great adventure, something he could hold in his heart when the days and nights were lonely. But all she managed was a thank you because a child with a runny nose was clamoring to be heard on the subject of having lost his last book.

Chuck went away. When he reached the steps and the moldy dignity of dead men's immortality no longer gripped him, he suddenly expanded. He was almost off on his great adventure. He would come back and lay a planet at her feet—or at least would invite her to one. He would catch her out of the library and propose to her and they would found a race of kings quite unlike the youngster with the runny nose.

He expanded and his dreams got bigger as he walked. He went down to the company and, with something of a grand air—spoiled a little because everyone was so busy—said that he was off tomorrow for Planet 19453X and glory. The girl gave him his time and asked him, after he had told her about his voyage, what his forwarding address would be. He started to explain that he was off for beyond beyond and would have gone far when he saw by her fixed polite smile that she hadn't heard a word he said.

But there was still Murphy. In the morning when he came down to the office he expected his hand to be pumped, a bottle of champagne to be broken across his space helmet and ribbons to be cut. Instead he found a sallow-faced, bored clerk reading a racing form and the clerk had never heard of him. Madman Murphy never came in on Saturdays.

Chuck went into a passionate explanation and the clerk finally consented to look in the files. He did this with such a superior air that Chuck almost murdered him.

The contract was found, the payments were checked, the clerk was finally satisfied—if somewhat surprised, for the number of such that were finally paid out were

quite few—and called a man named Joe to tell him that a Star-Jumper IV was to be placed at the disposal of one Chuck Lambert.

Chuck took his deed, checked the notary's commission, checked the location and in short wore the clerk's patience entirely out. Finally Chuck took it and went to the registry office, which was closed.

The janitor, however, proved of aid and informed him that he could send it in by registered mail, retaining a photostat. Chuck thanked him and was not further balked, for a lithographer was near at hand and eager for business.

At the port, Chuck landed with his light luggage, left it under cover from the light drizzle which had begun and went to find Joe. It took six searched hangars and a coffee shop to locate the greaseball and then it seemed that Joe had thought the ship was to be ready for Tuesday. However, much pressing got consent for today.

The next six hours were worse than the past eleven years. Chuck was here, so very near his goal, that seconds stretched out into light-years for him. What constituted his grand gesture was all muddled up and tangled with a number of details like Joe needing another cup of coffee and the star-board magnetrons being worn out on the Star-Jumper and having to be replaced and the hydraulic jack which wouldn't function and after an hour's repair had to be abandoned for another one which had stood right there all the time.

If Chuck had not got out of that port that afternoon he would have died of apoplexy, youth or no youth.

He was almost ready, the ship was finished, the port clearance secured and Joe given a final cup of coffee when he found out that the food supplies he had had shipped to the port could not be found.

It was a dark, a rainy, wet day, when he finally rose from the port, entered the acceleration height, put down his throttle and was gone. Chuck Lambert had never tasted such sweetness. The 4G sag was nothing to him. The age and obsolescence of the ship was nothing to him, his empty stomach was entirely forgotten. Here was sweetness. After eleven years he was on his way.

Now, inasmuch as the Sunday feature sections you see do such a fine job of telling how space travel looks and feels and as you may have done some of it yourself and

so don't need to be told, a light-year by light-year description of Chuck Lambert's voyage to Planet 19453X is not necessary.

He saw the strange phenomena of light changes, size changes, star displacements and elongations and he felt all the bodily discomforts and euphorias and he saw the dark stars and luminous masses and, in short, he gloried in it. He wrote a log which sounds like a piece of poetry done by at least Julius Caesar. Space and the Universe were his onion. He ran out of dimensions like a spilled wineglass.

If he left anything out and if he missed anything, it was because after three of four days of it he had to get a little sleep.

He spent the following month filling his log, checking his course and building up a paper empire which stopped only because most of his supplies were not paper wrapped and he ran out of writing materials.

Probably few men have ever owned as much conquered Universe and purchased Earth as Chuck Lambert in those long weeks of his voyage. But all things must come to an end and all dreams must break. Chuck Lambert landed at last on Planet 19453X.

Now it happened that he had paid very little attention to his ship. The Star-Jumper was old and cranky and full of missing rivets. Her type had been developed for courier service in the first Colonial Revolt and about fifty thousand like her had been sold at a hundred dollars apiece to a man named Fleigal in Brooklyn. Her sole virtue was in her near approach to perpetual motion but of her drawbacks there is not enough paper here to adequately condemn them. Like any military job she had neither grace nor charm, safety nor comfort. And she managed in this landing in a way calculated to drive any veteran of the spaceways entirely off his usual imbalance. She would not sit down.

Had Chuck been a more experienced navigator he would not have understood why. And he was very far from that. When he reached the star, he had to brake to a full stop in the middle of the system and take five hours' worth of painful navigation to make sure the star was the right one. Then he used up two days examining orbits and the planets which ran in them to find 19453X, a thing which any professional would have finished up before he had the star itself within a light-year.

But the hunt and poke system at last gave results and Chuck, without observing at least one very strange fact about this area, tried to get down.

19453X had an atmosphere and a great many clouds. It was about seven times the size of Earth. It had no seas but seemed to possess a remarkable number of marshy areas which left the dry land at about one-fifth. It had numerous ranges of mountains and great, stretching plains. Chuck had all this down and noted with some enthusiasm, for it was his world, all his.

And then the Star-Jumper drifted somewhere between ground and sky, no power, no lifts, nothing.

Chuck became aware of this situation after a moment or two. The leaded ports were not such to permit a very good view below. He put a trifle of power to the magnetrons because he was anxious to get there.

He had his kingdom all organized and his palace half built when he touched, and his head was full of such a confusion of thoughts that he was not instantly aware of anything wrong.

Then he unbuckled himself from the pilot's seat and started to get up. Two things happened. He hit his head on the overhead and the ship came off the ground.

He was not aware of the second fact until he opened the door to the rear compartment. He thought he must have left a throttle open and hastened back to the seat. His feet got no traction. No throttle was open. The Star-Jumper was going skyward at an amazing rate.

Chuck buckled himself in again and with patience, put the ship down once more. He stayed there at the controls and watched, just in case. He was in a grottolike valley, honeycombed, colorful hills before him and beside him. Those promptly began to recede once he shut the power off. He was rising!

Chuck was no electronic genius. He had read the books. And they didn't have any answers for this. He assumed a high wind and poured on power. Back went the ship, bump, bump against the ground.

He coaxed the controls until the Star-Jumper skittered over the ground. A big cave opened up in the hill ahead and he resolutely put his ship's bulk into it. It was a tight squeeze and it didn't help the paint, but the Star-Jumper's eccentricity was foiled. Whether it would or no, now, it had to stay down.

Chuck got up. He put on his helmet, took down some extra oxygen cartridges, buckled on his flying belt and was prepared to explore. That he was having difficulty in here getting traction and bumping into things he did not heed. He was space dizzy already. He had been knocking around in this interior for so many weeks he couldn't register any difficulty. He didn't.

He opened his air lock, closed it behind him with commendable caution, opened the outer port and started to jump down.

But he didn't jump down. He went up and hit the cave roof with a clang, to cling there like a bat upside down and completely bewildered. He was walking wrong end to and getting traction like a fly and, personally, it didn't feel good.

He stood there, head down, thinking about it. Nothing in the numerous books Isabel had dug out for him had contained any such data as this. Carefully he walked toward the light and came close to the opening. There he slipped and "fell" straight up over the lip and would have kept on going to the absolute zero of space if his flying belt hadn't been in working order. It was. About a thousand feet up, Chuck got it going and with considerable gratification, power-dived back to his planet and by dint of some adjusting, made a soft landing in a clay bank, straight up.

The clay was very sticky and mired his boots considerably and, belt still going, he managed to clamber out of this strange bog to dry land. He tried here to turn his jets off, and much to his surprise, when he turned them off, he stayed right side up just as he thought he should.

Chuck heaved a very deep sigh of relief in that moment. For a while there he thought he had run into something which was way beyond his engineering depths; with some confidence now he struck out afoot for the first ridge which would let him over and into the broad valley he had spotted coming in.

Spaceports, being insulated the way they are, have a nasty knack of obscuring the view and he did not realize until he reached the crest that he had, indeed, a lovely, lovely planet.

It was green and purple and gold and the docks and rivers shined below him. Trees waved in a gentle wind, grass rippled, brooks laughed. It was charming.

He went down the slope, careful because he didn't seem to be able to restrain a bounding tendency he had never before



noticed in his walk, and knelt reverently beside the first brook. It was his, all his.

Incautiously he started to remove his helmet, being all unguarded before this greenery, and promptly began to suffocate. It was not the pressure. As far as pressure went, that was about equal. It was the quality of the air. As soon as he started to breathe it he started to suffocate. He had enough promptitude to clamp his helmet back on and give himself oxygen, and only that saved his life.

Was it because the air was poison? But no, he didn't seem to be poisoned, only unsatisfied. He stood there and blinked in the bright daylight at the lovely trees.

He looked at the brook. The water was laughing but was it laughing at him? He scooped some up in his fingers, half expecting it to turn into vitriol, but it was cool and moist and pleasant. He opened his helmet air lock and inserted a cup of it and when he got it through and got the swallow down he was instantly sorry. It came right back up.

It wasn't that it tasted bad; that would be a relief. It just wasn't the sort of thing his stomach wanted and his stomach didn't know why.

This made Chuck a trifle bitter.

A pretty brook, lovely clouds, obvious air. He made a hurried recheck of his oxygen supply and decided he had enough for a couple of months if he was careful of it. But what of his lovely kingdom?

He did not see that he had real live subjects until he had gone nearly a kilometer and then he saw the cluster of huts, neatly blended into a river bend's trees.

The village probably contained a couple of hundred people or things, and Chuck instantly loosened up his gun in its holster and went forward quietly. But if he had just now seen them, they had long since seen him and there wasn't so much as a pet in that village.

He looked it over. Comical huts, fitted with round thatch roofs, floored with river reeds. There were metal cooking pots and metal weapons. And a real, live fire smoldered in the middle of the main hut. It was common. It was almost uninteresting except that these beings were sentient and skilled in a certain culture.

Perhaps he would not have had any intercourse with them at all if he had not, just as he was leaving, found the old woman.

She was too old to be spry and she was too scared to hide all of her in the hay

pile and so Chuck tapped her gently and coaxed her out.

"Oof; Oof!" she screamed, meaning, "Don't kill me!"

Chuck looked her over. The features were not quite right, but this creature was a biped, looked remarkably like Earth women and certainly didn't offer him any menace.

Chuck made her understand, amid many "oofs" that nothing untoward was intended. His efforts to communicate the facts by signs, that he was the owner of this planet and that these people were his subjects were received round-eyed and interpreted in some outlandish fashion he was never to know.

After a while she finally took him to the village center where a bucket of water stood beside a big stone square and Chuck sat down. He knew he couldn't drink the water but he wanted to appear mild and tractable, the way a true planet owner should.

She went off and yelled around in the reeds and after some time a number of men, hairy fellows, mostly forehead and biceps, came back, carefully extending their spears to be ready to repel boarders, and finally saw that Chuck sat there mildly enough.

This was all very satisfying to Chuck. This was the way it should be. They considered him a superior being and he began with many oofs to convince them how very safe and mild he was and how they would benefit from his rule. They got rather near and finally relaxed enough to ground their spear butts. Chuck grew expansive. He was talking through his electronic speaker, which was turned up rather high, and his voice must have reached a good long way for more and more people came curiously to see what was happening.

Finally a young maiden whom Chuck found not at all ugly crept forward and touched his foot. This excited some wonder. She looked bravely up at him and he felt elevated. She took a stick and began to clean the clay off his boots with short pries and Chuck, in middle sentence, found himself getting lighter and lighter. He was a foot off the ground before the end of his uncomprehended paragraph and was beginning to accelerate when his audience took off with one long scream of alarm.

The girl crouched where she had been, looking up. Chuck rose to a hundred feet, going faster, got his jets going at last and came down.

The girl cringed, head bowed, shivering. Chuck touched her hair and then a jet

spluttered and he went up once more. Altogether he considered the interview at an entire end. Humiliated, he navigated himself over the center of the village, looked sadly down at the frightened eyes peering from the reeds and then changed his course back to the ship. Enough was enough for one day.

He sat for a long time on his cabin ceiling, thinking about fate that night. He wrote a letter to Isabel in which he confessed himself entirely confounded and disheartened. Before he finished it he was beginning to get mad at Madman Murphy.

Eleven years. Eleven hard, toilsome years for a planet he couldn't even walk upon!

He crept out about midnight and looked at the stars, holding on hard to the cave lip to keep from flying away into space, and then it occurred to him that he had a legal course.

He went back to it and worked it out. It was true. He was on the extreme perimeter of the galaxy. The star in whose system his planet lay was not, contrary to ordinary behavior, traveling outwards from the hub but was traveling inwards at a fast rate. Elementary calculation showed that it was making some thousand miles a second into the galaxy. If he could claim that this was not, as the contract stated, a system belonging to the Earth Galaxy, then he could have Madman up before the courts and have his money back. With that he could buy another place, a few thousand acres on some proven colonial orb and he and Isabel could settle down and raise kids. And then he got to thinking about the vagaries of law and the money lawyers cost and realized that Madman Murphy would never have to refund a penny.

This almost crushed him.

He had a planet on which he could not possibly live, whose air he could not breathe, whose water he could not drink, and the owning of it had taken the best of his life. He was almost ready to end it all when he heard a rustling outside.

There was a *clink, clink*.

Visions of a combat, blaster against spears, drove all thought of suicide away and he helmeted himself promptly and passed through his air lock to find, not warriors, but the girl who had cleaned his boots.

It was hard standing on the ceiling shining a light down upon her. She was very humble. She had a bowl of white liquid which was probably milk and a little

piece of bread and she made shivery motions at them.

Instantly Chuck knew he was a god.

Now there have been many men in the human race who have found themselves gods and never once has it failed to bolster their drooping spirits nor spur their lagging wits. She had come like a brave little thing to leave food for the goblin and if she died in the consequence, she had done it all for her village. It was plain.

Chuck hand-held down his ship side and came near her. He knew better than to try to eat that food, and it wasn't food he was interested in. It was the fact that she walked on the ground and he couldn't. She had some beads around her neck, metal spheres of some brilliance. He held his hand for them and she took them off and gave them to him. He gave her a fountain pen which had ceased to work and when she accidentally let it go, he brought it down from the ceiling and returned it to her. She tied it with a dress string and there it bobbed trying to rise.

"Oof, oof," she said, meaning "Thank you."

"Thank you," Chuck said, meaning, "Oof, oof."

He remembered, as he looked at these beads, the clay on his boots and he swiftly put several handfuls of rocks in his pockets. They kept him down. This was nerving. He went for a walk with her in the starlight.

It is certain they did not talk about much. It is also certain that Chuck did a terrible lot of thinking. He did a lot of calculating in an elementary way and then, suddenly, things came right to him.

Madman Murphy had skunked him. There was no recourse. But it had been an adventure.

He was taking her back to the ridge so that she could descend to her valley and tell people it wasn't so tough talking with gods after all and that they did not always go spinning off into space on you. But just before they reached the place he would leave her she stopped and pointed into a hole in the hill.

There were lots of holes in the hill, but she was insistent about this one as one of the local sights, and he obliged her and startled her into a screech by turning on a flashlight and shining it down.

He almost screeched himself.

The whole hole was glittering yellow.

Chuck went wonderingly forward and put out a gingerish hand. The entire place was

studded with pure metal. Pure yellow metal. Where ore came in veins on Earth it came in solid elements up here. As far as he could estimate he was looking, down this tunnel centuries old, at about a thousand million tons of metal.

This was what they made into spears and vessels and he had missed the quality of these items only because spears and vessels get dirty. He was afraid to examine it closer. He could see from where he was that if there was this much in one hole—

Chuck took a piece and tested it. But it was very hard. He pounded at it a bit. It was still too hard. He looked at it and let it fall. He put a knife into a crack and tried to pry out a bigger piece and the knife slipped and went up and lay against the roof of the drift.

Chuck stood there and thought about it. Then he raced back to the ship, leaving the girl where she was, and returned carrying whatever was of weight he had been able to grab. He went to work.

Two months later, Chuck Lambert sat behind a big desk in the Universe Building in New York City.

The newspaper reporters even were awed by the proportions of this office and the scientists and business men present were very polite.

"Boys," he said, "you've got all the story there. How I made the trip, what I found, what I intend to do. I think that's about it."

"Mr. Lambert," said a *Ledger* reporter politely, "as a matter of human interest, could you let me have some personal details. Some little thing— You mentioned a girl named Isabel—"

"Married," said Chuck. "Married yesterday up at the City Hall. That's why," he added with a big grin, "I don't want to drag on here."

"But this girl on 19453X—" said another reporter.

"Rich. She'll be richer. They'll all be rich even if I don't ever see my subjects again. Now if you don't mind—"

"Mr. Lambert," said the business manager of *International Flyways*, "you are sure you can deliver enough of this material—"

"Enough," chimed Ross of *Ross Construction*, "to make skyscrapers—"

"And bridges—" added the bridge builder.

"And spaceships," said *Intercolonial's* man.

"Gentlemen," said Chuck, "I towed down a piece of that metal as big as the village

men could hack out and melt up for me. That was with crude stuff. Just a sample. I've got billions, billions of cubic yards of it and no cost to transport. It's cheap and since I filed on the rest of the planets in that system, I'm afraid this is a monopoly. But just the same, the price is the same as steel to you. Now if you don't mind—"

They were satisfied and they filed out, all but one thick-lensed little man.

Chuck beamed on him. The little man took heart.

"I'm from *Daily Topics*, you know," said the little man. "Our readers . . . well, they like to get a pretty lucid account—"

"Sure," said Chuck. "Sure." He waved a hand at the glittering nodules of metal on his desk which were incased in lead holders. He took one out and it promptly lifted and went up to the ceiling where it stuck. Chuck, after a few jumps, got it down again.

"That's Lambert metal for you," said Chuck. "Floats. Rises. Negative weight. Point nine tenths the tensile strength of steel. Can be forged—"

"But I don't understand what makes it rise," pleaded the little man.

"Planet 19453X—which I have rechristened Isabel—is part of a renegade system which moved in from another galaxy after some interminable crossing of space. It is traveling toward our hub but it won't get there for another three or four billion years. Its matter is made of another kind of energy from ours, which, making up in usual atomic and molecular forms, has no affinity or repulsion for our own matter. It is very simple. It just isn't made of the same kind of energy."

"But what makes it rise?"

"Planets revolve and things on their surface have centrifugal force. This material still has mass, and so it seeks to rise. Therefore it will make bridges which need no abutments, ships which have to be cargoed to be kept in the atmosphere, skyscrapers which will have to be anchored, not founded—but I am sure you understand."

The little man blinked. He released one of the balls of Lambert metal and it went up to the ceiling. He fled.

Chuck Lambert went home to Isabel to plan out a ninety room house on Long Island and five kids.

Madman Murphy has a big picture of Chuck in his window and a fine argument about wildcat planets. But don't trust him. There was only one 19453X.

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# Next Friday Morning

By D. W. Meredith

THE phone—it was an old-fashioned, strictly, utilitarian model without so much as a vision screen to call its own—lacked any resemblance to an instrument of doom. There is something horrible about a machine that turns on its creators—the ship gliding with studied indifference toward the barely submerged reef, the aircraft suddenly wreathed with flames, the radio that hesitates in the middle of a commercial and blurts out a message of disaster. It is even worse when the pattern is so obscure that the buried instinct has no warning, no reason to cry, "I knew it! I knew it!"

Professor John Harley was in bed, deep in the symbolic algebra of Hogben's genetics equations, when the phone rang just before midnight. With a resigned sigh he placed his book on a night table and put the instrument to his ear.

"Hello! Professor Harley?" The voice cracked with excitement. "This is Walter Symonds. We've done it, professor, we've done it!"

"That's very interesting, Walter," the professor answered dryly, "and I'm extremely glad to hear it. However, if it isn't asking too much, just what have you done, and is your 'we' editorial, or are you still working with your collaborator?"

"We've effected a temporal displacement of mass, Ortega and I." Symonds' voice was lower, but still jerky and strained in marked contrast to his usual calm. "It's absolutely clean-cut! We sent ten cubic centimeters of silver fifteen seconds into the future, and stood there and watched it materialize when the time had elapsed. Ortega's math was right after all. Professor, can you come over?"

"I'll be there as soon as I can, Walter," the professor said, and hung up. Time-travel, he thought incredulously. His rickety heart kept pace with his mounting excitement, and he forced himself to relax for a few minutes. Then he dressed slowly, got out of his car, and drove through Berkeley toward the San Francisco Tunnel. As the miles dropped away he reviewed with

honest admiration the professional careers of the two remarkable men he was about to see.

At Berkeley he met Joseph Ortega, who was variously acclaimed as a genius and denounced as a quack. Ortega's father was a day laborer, and Joe had got most of his early education on Main Street in Los Angeles. Back in the days before World War II he entered a trade school for a course in aircraft template layout, with a view to acquiring a position paying the munificent wage of fifty cents an hour. To his utter horror, he found that he was supposed to have a working knowledge of a thing called trigonometry. Completely unaware of his latent mathematical ability, he bought a textbook in a secondhand store, and mastered the fundamentals in a week. That started it. He knew trigonometry before he studied geometry, came algebra, calculus, Cartesian equations, logarithms—all the basics. Techniques that the average university student takes for granted were to him a never ending source of wonder. In 1941 he innocently took to the printer a manuscript entitled: "A Statistical Analysis of Nuclear Cross Sections." Of course, it was promptly censored out of existence, but not before it brought him to the attention of the Manhattan Project, where he did valuable work on resonance mechanics. In 1959 he published the Ortega S-Field Equations, which provoked a storm of controversy. In 1960 came the historic meeting with Symonds and a year later the two of them, working in the Marin County Laboratory, isolated the graviton. A pair of very smart boys.

It was after one o'clock when Professor Harley parked his car in the driveway and walked past Symonds' neat little ranch-type home toward the cement block laboratory. The lights of Mill Valley shone in the lower distance, and the night air was heavy with the scent of flowers.

At his knock the door was flung open by a short, little man resembling a cross between a dynamo and a French poodle. Professor Harley found himself clasped in

a fervent embrace and inundated by a torrent of words.

"Welcome, John, welcome, my Juano. Ah, come in, come in! Why were you not here? It was glorious. History we have made tonight! History!—and you in bed, dreaming of a procession of generations."

This was Ortega. Behind him, big, blond Symonds was choking with laughter. The professor gently disengaged himself.

"Are you sure you and Walt haven't been dreaming, Joe? I want to see an example of temporal displacement before I commit myself. Proof before applause, you know."

"Proof, my Juano, proof? You shall have it in full measure, pressed down, and overflowing. When we—"

Still smiling, Symonds interrupted. "In about one minute, Joe, *you're* going to be pressed down. We'll give you a demonstration, professor. As for applause, I know I'm going to be too busy finding out things about all the time-travel paradoxes that have been plaguing the theory boys."

He led the way across the room. The professor followed and Ortega skipped happily along in the rear.

The mechanism was deceptively simple. Professor Harley looked at the innocuous assortment of tubes and condensers and wiring, at the everyday power leads, at the little insulated dais with the crystal loop around it.

"It doesn't look very involved," he said doubtfully.

Ortega let out a screech. "Involved? Ah, Juano, if you but knew—"

"There was nothing uncomplicated about the math," Symonds' voice was a cool shower. "The principle is simple, though. Dunnes' hunch was right, the old slit-in-time idea. Watch."

Unhurriedly, he took from his pocket a little plush jeweler's box and from the box a tiny silver cube. He placed the cube on the dais, glanced at the dials on the little instrument panel, and flipped a switch. Professor Harley's eyes were riveted on the silver cube.

"Takes a minute to warm up," said Symonds quietly.

The crystal loop was shimmering with violet light. Then, briefly, the silver had an aura of its own. The cube was wavering, flickering. It vanished.

Professor Harley's hands were clenched and his heart was thumping in an alarming way, but he didn't notice.

"It's still set for fifteen seconds," said Symonds detachedly. "There!"

The cube was back. Symonds switched off the power.

"Now it's parallel with the slit through which we observe—our 'now,'" he said. "Later, I'll make the jump myself, see things from the viewpoint of a different 'now.' Hey, pal, relax. It's bad enough to nurse Joe through periodic hysterics without you folding up. Take it easy."

The professor smiled and lit a cigarette.

"You're not just kidding. It got me that way the first time, and you should have seen poor Joe. He all but tried to walk up the wall."

"I don't blame him," said Professor Harley. "What's your present limit on this thing?"

"Half a minute, but it'll be more tomorrow. I can increase the windings on the coil that produces the primary field and get a limit of seven or eight days for a kilogram or so of mass."

The professor was frowning. "Walt, the material actually exists in a real future?"

Symonds chuckled. "There's a very neat answer to that. The field exists four-dimensionally, and the temporally displaced object is still in it. Any disturbance causes a potential drop that actuates a relay right here—'now'—that brings it back in a hurry. It's foolproof."

The professor agreed. Half an hour later the three men were seated around a card table and disposing of scrambled eggs and toast while coffee bubbled in the percolator on the lab hot plate.

They finished the meal and lit cigarettes before anyone spoke. Symonds started the conversation.

"Well, professor, what news from the outside world?"

Professor Harley studied his glowing cigarette. "There's a Pan-American conference on soil erosion being planned. They're holding it at Rio. Interested?"

"The century of the conference table manufacturer," laughed Symonds. "No wonder our forests are disappearing. What else?"

"Double talk about a general strike in New York sometime next month."

Symonds frowned. "That'll mean the National Guard and the Industrial Mobilization Corps will be throwing their weight around. How lovely. Well, there's nothing we can do except sign petitions. Continue."

"One more thing," said the professor,

"Washington announced last night that on the fourteenth—next Friday morning—the Army will fire a space torpedo with a fermium war head into the center of Kwadjelein atoll."

He was surprised at the reaction. Symonds turned white and stared incredulously. Ortega made a noise between a screech and a moan, and then burst into speech.

"Juano, no! It may be—who knows?—the finish. I have made figures—there is danger. Cannot they tell? Fools! Idiots!"

The professor cut him off. "Go slower, Joe. Try to make sense." He turned to Symonds. "What's he talking about?"

Symonds shook his head. "It's his department, not mine." He caught Ortega by the shoulder. "Take it easy, Joe, for Pete's sake. Pretend you're speaking to the Berkeley faculty, ah?"

Ortega subsided a little. "I have separated some fermium—that 101FM244—with the mass spectrograph. Juano, you know what is the K factor?"

The professor shook his head.

"If one hundred free neutrons in an atomic reaction produce fissions causing one hundred one free neutrons, there will be a chain reaction. K will equal one point oh one. You understand? If the K factor is greater than unity, the reaction is self propagating; if less, it damps out. In fermium, my Juano, it is too high to take chances. So is the mass difference, one of the basic terms of the Einstein formula that lies back of it all. Is it clear now?"

The professor looked doubtful. "Well . . . yes, in a general way. I'm sorry if I don't seem too bright, but—"

"Ah, no Juano," protested Ortega. "Atomics is not your field. Do I know how many spotted pigs come from a white grandma and a brown grandpa? I do not, nor do I care. But this bomb That I know. That I fear."

"But Joe, surely the A.A.A. would know if there's any chances of starting the . . . er . . . carbon nitrogen cycle." But where did I get that, he thought.

"The Bethe-Weizsäcker reaction. Fool! Any reaction bomb can do that. It damps out. This could start a reaction at the heart of the planet. Finish."

"He's probably right," said Symonds, with gloomy pride. "He juggles your calories and mass units back and forth the way most people handle feet and inches. Better, in fact." He smiled somewhat.

last week I overheard some women insisting that two-eighths make a sixteenth."

"Well," said the professor helplessly, "what do we do to get a postponement of the test? Write our congressmen? That sounds silly, but I can't think of a thing."

"Not enough time anyway," said Symonds. "This is Wednesday night—I mean Thursday morning. Hey! I've got it!" He gulped. "Professor, wasn't President Howard in one of your classes when he was attending the University? Yes? O.K.! He's known to be approachable by old friends, and you'll just have to qualify. Come morning call him long distance. Get that test delayed!"

Professor Harley blinked. "I couldn't do that. Anyway, I'm a geneticist. Why don't you do it? You've got ample prestige in the field."

"Sure I have and my mother's name was Simkhovich, too. Think what the Subversive Activities Committee would do to that. Professor, you've got to do it."

Symonds and Ortega waited silently. They could hear the murmur of the professor's voice inside, though the words were indistinguishable. It seemed a long time before he came out, beaming, and answered the unspoken question.

"The President will ask the Military Affairs Committee to hold up the test for a recheck of the known data. There will be an announcement later today," he said.

Symonds and Ortega looked at him and then at each other, and suddenly the tension was gone.

"He spoke highly of you—both of you," the professor added. "Have I earned my breakfast?"

It was generally acknowledged that he had, and they ate in the shaded little patio. Joan Symonds, Walter's dark and attractive wife, served them grapefruit, a mushroom omelette, toast, and coffee, and chaffed them indiscriminately.

"This levity," said Symonds with mock severity. "Have you no respect for your dignity as guest?"

The professor raised his hand in a restraining gesture. "After that breakfast, Walt, she's entitled to throw rocks at us if she wants."

Joan curtsied. "Thank you, sir. Don't let Walter fool you. He often says nice things to me, really. 'Gee, Joan, that's good cake,' or 'you made the bed nicely, dear,' or 'you made the bed.'"

She fled with an armful of dishes before Symonds could frame a retort. He smiled fondly after her.

The battered press car pulled into the drive just before dusk. Ortega noted the lettering on the car door—"San Francisco *CHRONICLE*"—and sighed. He rose to his feet as two men piled out and hurried toward the patio, one of them a dark, slender youngster, slightly in advance of the other. The second man carried a camera.

"Yes, gentlemen?" said Ortega.

"You're Ortega, aren't you?" said the youngster. He went on almost without hesitation as Ortega nodded. "It'll be on the air any minute now, but I'll give it to you straight. The House Military Committee has protested against postponement of the fermium bomb test, and the Subversive Activities Committee wants you and Mr. Symonds and Professor Harley to attend a Washington hearing next week. The test will be held tomorrow, Mr. Ortega. Would you mind stating if it is true that your father was a revolutionary in Mexico?"

Ortega swelled with rage. "He was a picker of sugar beets and a simple man, never a politician." He flinched as a flash bulb exploded almost in his face.

"It is true that you have advocated nationalization of steel, railroads, and mines?" said the *Chronicle* reporter.

"And if so, what of it?" asked Symonds' tired voice. He had approached unheard.

"Mr. Symonds, I'd like to ask you something. No offense intended. Was your mother's maiden name Simkhovich, and did you at M.I.T. room with a chap named Igor Protipoff?"

Before Symonds could answer another car pulled in. "*Examiner*" said the lettering on the door. Symonds blinked.

"Might as well wait for the others and have a press conference," he said.

They held a forum of their own after the newspaperman left.

"You can thank Cartwright for this upset," said Symonds savagely.

"Cartwright?" queried the professor.

"Sorry," Symonds answered. "I forgot that you boys aren't interested in politics. It's plain that Cartwright and Corning—Congressional buddies got together and issued a blast, and the President had to backtrack."

"Walter," said Ortega, quietly, "are you

going to tell Joan about the possible result of the fermium bomb?"

"No, I'm not," said Symonds. "If we go out with a loud bang, fine. If not, why worry her. No, let's just keep on our path for the time being. Come on out to the lab and watch time, if not tide, perform for us."

The lab lights were blinding at first. After his eyes became accustomed to the glare, he examined the time machine. The changes seemed minor. Two more of the curious little vacuum tubes had been wired into a circuit. Another coil had been added to amplify the field. Otherwise, it was no different.

"Let's try something heavier this time," said Symonds. He opened a drawer, and peered inside. "Ah!" Joan's kitchen thermometer. I should return my borrowings really. But, not right now."

He placed the thermometer on the crystal looped dais and switched on the power. Once again the violet haze flickered. Suddenly the dais was empty. Professor Harley drew a deep breath.

"How far, Walter?"

"A week, professor. Hope you're here to see it materialize."

Ortega coughed, and Symonds went on, hurriedly, embarrassedly: "I mean, if you're not lecturing or something."

The phone punctuated his sentence and he picked up the receiver with visible relief.

"Yes? Joan? . . . Your thermometer? Well, I can get it back if you must have it. . . . Fat for French fries? Test it with your finger. . . . Well, just a minute." Carefully he altered the settings. "Rather a short-lived experiment, that one. We'll bring back her kitchen appliance and use something else." He consulted his watch and checked the dials on the machine, first with puzzlement on his face, then urgency. "Strange, it should be back now."

"Some possible future interference?" hazarded the professor. Ortega did not speak.

"No, that would bring it back automatically, remember," said Symonds, "unless . . . unless—"

"If there is no future—" said Ortega, in choked tones.

Realization, sudden and complete, stood tangibly in the room. Professor Harley found himself winding his watch, his fingers stiff, his whole being numb and detached.



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